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**Department of Defense  
Fiscal Year (FY) 2022 Budget Estimates**

May 2021



**United States Special Operations Command**

*Defense-Wide Justification Book Volume 5 of 5*

***Research, Development, Test & Evaluation, Defense-Wide***

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United States Special Operations Command • Budget Estimates FY 2022 • RDT&E Program

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## Footnotes

### **FY 2020 Actuals**

Includes Division A, Title IX and X of the Consolidated Appropriations Act, 2020 (P.L. 116-93), Division F, Title IV and V from the Further Consolidated Appropriations Act, 2020 (P.L. 116-94) and the Coronavirus Aid, Relief, and Economic Security Act (P.L. 116-136).

### **FY 2021 Enacted**

Includes Division C, Title IX and Division J, Title IV of the Consolidated Appropriations Act, 2021 (P.L. 116-260).

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Department of Defense  
 FY 2022 President's Budget  
 Exhibit R-1 FY 2022 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

07 May 2021

Appropriation -----	FY 2020 Actual*	FY 2021 Enacted**	FY 2022 Request
-----	-----	-----	-----
Research, Development, Test & Eval, DW	851,798	812,658	695,643
Total Research, Development, Test & Evaluation	851,798	812,658	695,643

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Department of Defense  
 FY 2022 President's Budget  
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 (Dollars in Thousands)

07 May 2021

Summary Recap of Budget Activities -----	FY 2020 Actual*	FY 2021 Enacted**	FY 2022 Request
-----	-----	-----	-----
Applied Research	36,230	49,464	44,829
Advanced Technology Development	95,862	96,861	93,415
Operational Systems Development	719,706	666,333	557,399
Total Research, Development, Test & Evaluation	851,798	812,658	695,643
 Summary Recap of FYDP Programs -----			
Intelligence and Communications	6,359	6,062	5,994
Special Operations Forces	845,439	806,596	689,649
Total Research, Development, Test & Evaluation	851,798	812,658	695,643

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Defense-Wide  
FY 2022 President's Budget  
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07 May 2021

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Defense-Wide  
 FY 2022 President's Budget  
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 (Dollars in Thousands)

07 May 2021

Appropriation: 0400D Research, Development, Test &amp; Eval, DW

Line No	Program Element Number	Item	Act	FY 2020 Actual*	FY 2021 Enacted**	FY 2022 Request	S e c
--	-----	----	---	-----	-----	-----	-
25	1160401BB	SOF Technology Development	02	36,230	49,464	44,829	U
		Applied Research		36,230	49,464	44,829	
74	1160402BB	SOF Advanced Technology Development	03	95,862	96,861	93,415	U
		Advanced Technology Development		95,862	96,861	93,415	
240	0305208BB	Distributed Common Ground/Surface Systems	07	6,359	6,062	5,994	U
259	1105219BB	MQ-9 UAV	07	19,960	21,265	19,065	U
260	1160279BB	Small Business Innovative Research/Small Bus Tech Transfer Pilot Prog	07	27,278			U
261	1160403BB	Aviation Systems	07	256,658	250,623	173,537	U
262	1160405BB	Intelligence Systems Development	07	15,349	26,519	32,766	U
263	1160408BB	Operational Enhancements	07	158,493	174,122	145,830	U
264	1160431BB	Warrior Systems	07	76,628	64,095	78,592	U
265	1160432BB	Special Programs	07	19,357	7,494	6,486	U
266	1160434BB	Unmanned ISR	07	42,457	17,154	18,006	U
267	1160480BB	SOF Tactical Vehicles	07	11,104	14,256	7,703	U
268	1160483BB	Maritime Systems	07	70,738	68,538	58,430	U
269	1160489BB	Global Video Surveillance Activities	07	5,363	4,602		U
270	1160490BB	Operational Enhancements Intelligence	07	9,962	11,603	10,990	U
		Operational Systems Development		719,706	666,333	557,399	
		Total Research, Development, Test & Eval, DW		851,798	812,658	695,643	

R-122BAS: FY 2022 President's Budget (Total Base Published Version), as of May 7, 2021 at 13:19:37

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U.S., Special Operations Command  
 FY 2022 President's Budget  
 Exhibit R-1 FY 2022 President's Budget  
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Program Element Table of Contents (by Budget Activity then Line Item Number)

***Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***

Line #	Budget Activity	Program Element Number	Program Element Title	Page
25	02	1160401BB	SOF Technology Development.....	Volume 5 - 1

***Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***

Line #	Budget Activity	Program Element Number	Program Element Title	Page
74	03	1160402BB	SOF Advanced Technology Development.....	Volume 5 - 7

***Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***

Line #	Budget Activity	Program Element Number	Program Element Title	Page
240	07	0305208BB	Distributed Common Ground/Surface Systems.....	Volume 5 - 19
259	07	1105219BB	MQ-9 Unmanned Aerial Vehicle (UAV).....	Volume 5 - 29
260	07	1160279BB	Small Business Innovation Research/Small Bus Tech Transfer.....	Volume 5 - 37

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United States Special Operations Command • Budget Estimates FY 2022 • RDT&E Program

***Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***

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Line #	Budget Activity	Program Element Number	Program Element Title	Page
261	07	1160403BB	Aviation Systems.....	Volume 5 - 47
262	07	1160405BB	Intelligence Systems Development.....	Volume 5 - 115
263	07	1160408BB	Operational Enhancements.....	Volume 5 - 137
264	07	1160431BB	Warrior Systems.....	Volume 5 - 139
265	07	1160432BB	Special Programs.....	Volume 5 - 219
266	07	1160434BB	Unmanned ISR.....	Volume 5 - 221
267	07	1160480BB	SOF Tactical Vehicles.....	Volume 5 - 239
268	07	1160483BB	Maritime Systems.....	Volume 5 - 247
269	07	1160489BB	Global Video Surveillance Activities.....	Volume 5 - 283
270	07	1160490BB	Operational Enhancements Intelligence.....	Volume 5 - 285

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## **Research, Development, Test and Evaluation, United States Special Operations Command**

### **(\$ In Thousands)**

**The FY22 Overseas Contingency Operations accounted for in the base budget are as follows:**

- There are no Direct War costs accounted for in the base budget.
- Enduring costs accounted for in the Base Budget: \$35,462: Enduring Requirements are enduring in theater and in CONUS costs that will likely remain after combat operations cease and have previously been funded in OCO.

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## ACRONYMS

Acronym	Full Naming Convention
A2/AD	Anti-Access/Area Denial
AA	Air-to-Air
AbMN	Airborne Mission Networking
ACT	AFT Cabin Trainer
ADM	Acquisition Decision Memorandum
AMLCD	Active Matrix Liquid Crystal Display
ADS-B	Automatic Dependent Surveillance-Broadcast
AFRL	Air Force Research Laboratory
A&FC	Airworthiness and Flight Characteristics
AI	Artificial Intelligence
AISR	Airborne Intelligence, Surveillance, Reconnaissance
ALFPK	Austere Location Force Protection Kits
Alt PNT	Alternative Precision Location and Timing
AM	Amplitude Modulation
AMLCD	Active Matrix Liquid Crystal Display
AMN	Airborne Mission Network
AMS	Aviation Management System
APAS	Active Parallel Actuator System
ARSOA	Army Special Operations Aviation
ASE	Aircraft Survivability Equipment
ASIF	All Source Information Fusion
ATD	Advanced Technology Demonstration
ATPIALS	Advanced Target Pointer Illuminator Aiming Laser System
ATW	Advanced Threat Warning
AvFID	Aviation Foreign Internal Defense
AVS	Air Variant System
AWR	Air Worthiness Release
BAA	Broad Area Announcement
BFT	Blue Force Tracking
BLOS	Beyond Line of Site
BOA	Basic Ordering Agreement

## ACRONYMS

CASEVAC	Casualty Evacuation
C2	Command and Control
C3	Command, Control, and Communications
C4	Command, Control, Communications, and Computer
C4I	Command, Control, Communications, Computers, and Intelligence
C4IAS	Command, Control, Communications, and Computer Intelligence Automation Systems
CA	Civil Affairs
CAAS	Common Avionics Architecture Systems
CAR	Combat Assault Rifle
CASEVAC	Casualty Evacuation
CBA	Cost Benefit Analysis
CCFLIR	Combatant Craft Forward Looking Infrared Radar
CCA	Combatant Craft - Assault
CCH	Combatant Craft - Heavy
CCM	Combatant Craft - Medium
CCME	Combatant Craft Mission Equipment
CDR	Critical Design Review
CDU	Control Display Units
CERP	Capital Equipment Replacement Program
CFE	Contractor Furnished Equipment
CHMD	Color Helmet Mounted Display
CIO	Chief Information Officer
CIM	Civil Information Management
CIMDPS	Civil Information Management Data Processing System
CIRCM	Common Infrared Countermeasure
CMNS	Combat Mission Needs Statement
CMS	Combat Mission Simulator
CNVD	Clip-On Night Vision Device
COD	Correction of Deficiencies
COP	Common Operational Picture
COSI	Clip-On Short Wave Infrared Imager
COTI	Clip-On Thermal Imager



## ACRONYMS

COTM	Communications-on-the-Move
COTS	Commercial-Off-The-Shelf
CP	Counter-Proliferation
CPD	Capabilities Production Document
CQC	Close Quarter Combat
CT	Counter-Terrorism
C-UAS	Counter - Unmanned Aerial Systems
DAMS	Distributed Audio Media System
DCGS-SOF	Distributed Common Ground/Surface System--Special Operations Forces
DCM	Defensive Countermeasures
DCS	Dry Combat Submersible
DCU	Data Concentrator Unit
DDS	Dry Deck Shelter
DEWDS	Dedicated Electronic Warfare Display
DI2E	Defense Intelligence Information Environment
DOD	Department of Defense
DRWG	Distributed Common Ground/Surface System Working Group
DT	Developmental Testing
DTU	Data Transfer Unit
DVE	Degraded Visual Environment
DVEPS	Degraded Visual Environment Pilotage System
DWR	Defense Wide Review
DWS	Defensive Weapon System
EAC	Exploitation Analysis Centers
ECM	Electronic Countermeasures
ECOS	Enhanced Combat Optical Sights
ECP	Engineering Change Proposal
EDM	Engineering Development Model
EGI	Embedded Global Inertial
EGPWS	Enhanced Ground Proximity Warning
ELINT	Electronic Intelligence
EMD	Engineering and Manufacturing Development

## ACRONYMS

ENT/ASIF	Enterprise All Source Information Fusion
EO/IR	Electro-Optical Infrared
EOSS	Electro-Optical Sensor System
EOTACS	Expeditionary Organic Tactical AISR Capability Set
ER	Extended Range
ESA	Enhanced Situational Awareness
ETI	Evolutionary Technology Insertion
EUD	End User Devices
EW	Electronic Warfare
FAA	Federal Aviation Agency
FABS	Fly-Away Broadcast System
FAR	Federal Acquisition Regulation
FADE	Fusion Analysis and Development Effort
FCD	Field Computing Devices
FFRDC	Federally Funded Research Development Center
FDWS	Forward Defensive Weapon System
FM	Frequency Modulation
FMV	Full Motion Video
FOC	Full Operational Capability
FoS	Family of Systems
FQT	Functional Qualification Test
FRP	Full Rate Production
FSOV	Family of Special Operations Vehicles
FVL	Future Vertical Lift
FY	Fiscal Year
FYDP	Fiscal Year Defense Plan
GATM	Global Air Traffic Management
GCC	Geographical Combatant Commander
GCS	Ground Control Station
GEOINT	Geospatial Intelligence
GFE	Government Furnished Equipment
GIG	Global Information Grid

## ACRONYMS

GMV	Ground Mobility Vehicle
GOTS	Government-Off-The-Shelf
GPPU	General Purpose Processing Units
GPS	Global Positioning System
GSK	Ground Signals Intelligence Kit
GTR	Gun Training Room
HEL	High Energy Laser
HF	High Frequency
HFIS	Hostile Fire Indicator System
HFTTL	Hostile Forces Tagging, Tracking, and Locating
HHI	Hand Held Imager
HLM	Handheld Laser Marker
IC	Intelligence Community
IDIQ	Indefinite Delivery/Indefinite Quantity
ILS	Integrated Logistics Support
IM	Insensitive Munitions
INOD	Improved Night/Day Observation/Fire Control Device
IOC	Initial Operational Capability
IPN	Installation Processing Node
IR	Infrared
IRAD	Industrial Research and Development
IRCM	Infrared Countermeasures
IRES	Improved Rotary Wing Electro-Optical Sensor
IRSS	Infrared Suppression System
ISIS	islamic State of Iraq and Syria
ISP	Integrated Survey Plan
ISR	Intelligence, Surveillance and Reconnaissance
ISR&T	Intelligence, Surveillance, Reconnaissance, and Targeting
IT	Information Technology
ITMS	Integrated Tactical Mission Systems
JIE	Joint Information Environment
JOS	Joint Operational Stocks

## ACRONYMS

JTAC	Joint Terminal Attack Controller
JTWS	Joint Threat Warning System
LAM	Laser Aiming Marker
LCM	Low Cost Modification
LCS	Load Carriage System
LEA	Long Endurance Aircrat
LFT&E	Live Fire Test and Evaluation
LiDAR	Light Detection and Ranging
LMAMS	Lethal Miniature Aerial Munition Systems
LOS	Line of Sight
LPI/LPD	Low Probability of Intercept/Low Probably of Detection
LRBS	Long Range Broadcast System
LR/LE	Long Range Endurance
LRIP	Low Rate Initial Production
LRU	Line Replaceable Unit
LSDB	Laser--Small Diameter Bomb
LTATV	Lightweight Tactical All Terrain Vehicle
LWIR	Long-Wave Infrared
MALET	Medium Altitude Long Endurance Tactical
MAAWS	Multi-Purpose Anti-Armor/Anti-Personnel Weapons System
MANET	Mobile Ad-hoc Networking
MC/COP	Mission Command/Common Operational Picture
MCE	Military Construction Collateral Equipment
MDA	Milestone Decision Authority
MDO	Multi-domain Operations
MEDEVAC	Medical Evacuation
MELB	Mission Enhanced Little Bird
MERIT	Military Exploitation of Reconnaissance and Intelligence Technology
MFD	Multi-Function Display
MFP	Major Force Program
MG	Machine Gun
MGS	Modular Glove System

## ACRONYMS

MICH	Modular Integrated Communications Helmet
MIP	Military Intelligence Program
MIPR	Military Interdepartmental Purchase Request
MISO	Military Information Support Operations
MLE	Military Liaison Element
MMP	Multi-Mission Payload
MPE	Maritime Precision Engagement
MPU	Mission Processor Unit
MR/ME	Medium Range/Medium Endurance
MS	Milestone
MSSEP	Mobile SOF Strategic Entry Points
MTA	Middle Tier Acquisition
MTD	Mission Training Devices
MTPS	Mission Training and Preparation Systems
MTS-B	Multi-Spectral Targeting System--B
MTTE	Maritime Technology Transition and Exploitation
MTUAS	Multi-Mission Tactical Unmanned Aerial System
MWC	Mid-Water Column
MWIR	Mid-Wave Infrared
MWS	Missile Warning System
MYP	Multiyear Procurement
NDI	Non-Developmental Item
NDS	National Defense Strategy
NET	New Equipment Training
NGA	National Geospatial-Intelligence
NGFLIR	Next Generation Forward Looking Infrared Radar
NG CCFLIR	Next Generation Combatant Craft Forward Looking Infrared Radar
NGLS	Next Generation Loud Speakers
NLP	Natural Language Processing
NM	Nautical Mile
NRE	Non-Recurring Engineering
NSAV	Non-Standard Aviation

## ACRONYMS

NSCV	Non-Standard Commercial Vehicle
NSSS	National Systems Support to SOF
NTM	National Technical Means
NVD	Night Vision Devices
OA	Operational Assessment
OCO	Overseas Contingency Operations
OEM	Original Equipment Manufacturer
OFP	Operational Flight Program
OT	Operational Test
OT&E	Operational Test and Evaluation
P3I	Pre-Planned Product Improvement
PCAS	Persistent Close Air Support
PCU	Protective Combat Uniform
PDR	Preliminary Design Review
PE	Program Element
PED	Processing, Exploitation, and Dissemination
PGL	Precision Geo Location
PGM	Precision Guided Munitions
PISA	Predator Integrated Signals Intelligence Architecture
PME	Prime Mission Equipment
POR	Program of Record
PSM	Personal Signature Management
PSP	Precision Strike Package
PTT	Part Task Trainer
QL-CBA	Quick-Look Capabilities-Based Assessment
RAMS	Removable Airborne Military Information Support Operations System
RC-IED	Counter Radio Controlled-Improvised Explosive Device
RCI	Rapid Capability Insertion
R&D	Research and Development
RDT&E	Research, Development, Test, and Evaluation
RECCE	Tactical Reconnaissance Kit
RF	Radio Frequency

## ACRONYMS

RFCM	Radio Frequency Countermeasures
RIS	Radio Integration System
ROP	Remote Observation Post
RSTA	Reconnaissance, Surveillance, and Targeting Acquisition
RWR	Radar Warning Receiver
SA	Surface-to-Air
SAFC	Special Applications for Contingencies
SAPNET	Special Access Program Network
SATCOM	Satellite Communications
SBIR	Small Business Innovative Research
SBUD	Simulator Block Updates
SCE	Special Communications Enterprise
SCO	SOF Cryptologic Operator
SDB	Small Diameter Bomb
SDN	SOF Deployable Node
SDN-EP	SOF Deployable Node--Extension Packages
SDN-H	SOF Deployable Node-Heavy
SDN-L	SOF Deployable Node-Light
SDN-M	SOF Deployable Node-Medium
SDV	Sea, Air, Land (SEAL) Delivery Vehicle
SEAL	Sea, Air, Land
SEALION	Sea, Air, Land, Insertion Observation Neutralization
SFAC	Security Forces Assistance Craft
SGM	Small Glide Munition
SIE	Special Operations Forces Information Environment
SIGINT	Signals Intelligence
SIL	System Integration Lab
SIM	Sensor Integration Module
SIP	System Integration Partner
SIRFC	Suite of Integrated Radio Frequency Countermeasures
SKR	Silent Knight Radar
SMS	Special Mission System

## ACRONYMS

SOCRATES	Special Operations Command, Research, Analysis and Threat Evaluation System
SOF	Special Operations Forces
SOF-P	Special Operations Forces--Peculiar
SOFNET	Special Operations Forces Network
SOFPREP	Special Operations Forces Planning, Rehearsal, and Execution Preparation
SOFS	Special Operations Forces Support Activity
SOMPE	Special Operations Mission Planning and Execution
SOPGM	Standoff Precision Guided Munitions
SoS	System of Systems
SPCOM	Special Communications Field Segment - Enterprise
SPEAR	SOF Personal Equipment Advanced Requirements
SPPN	Special Purpose Processing Node
SMU	Special Mission Units
SR	Special Reconnaissance
SR/SE	Short Range/Short Endurance
SRTV	Secure Real-Time Video
SSE	Sensitive Site Exploitation
STAMP	SOCOM Tactical Airborne Multi-Sensor Platform
STC	SOF Tactical Communications
STLD	Small Target Location Devices
STTR	Small Business Technology Transfer
STUAS	Small Tactical Unmanned Aerial Systems
SURG	Suppressed Upper Receiver Group
SWAP	Size, Weight and Power
SWCS	Shallow Water Combat Submersible
SWIR	Shortwave Infrared
TACLAN	Tactical Local Area Network
TAK	Tactical Assault Kit
TALOS	Tactical Assault Lightweight Operator Suit
TAS	Threat Awareness System
TCCC	Tactical Combat Casualty Care
TDL	Tactical Data Link



## ACRONYMS

TENCAP	Tactical Exploitation of National Capabilities
TF/TA	Terrain Following/Terrain Avoidance
TOCNET	Tactical Operations Center
TMN	Tactical (Airborne) Mission Network
TMS	Tactical Mission Systems
TMMR	Technology Maturation and Risk Reduction
TPAN	Tactical Personal Area Networks
TRL	Technical Readiness Level
TSOC	Theater Special Operations Command
TTV	Team Transportable Variant
TTL	Tagging, Tracking and Locating
TV	Television
TVS/RSTA	Tactical Video System/Reconnaissance, Surveillance, and Target Acquisition
UARC	University Affiliated Research Agreement
UAS	Unmanned Aerial System
UAV	Unmanned Aerial Vehicle
UGS/UMS	Unattended Ground Sensors/Unattended Maritime Sensors
UHF	Ultra High Frequency
UI	User Interface
URG	Upper Receiver Groups
VAK	Virtual Accompany Kits
VAS	Visual Augmentation Systems
VAS-BM	Visual Augmentation-Binocular-Monocular
VASWA	Visual Augmentation System-Weapons Accessories
VBIED	Vehicle-Borne Improvised Explosive Device
VBL	Visible Bright Light
VBSS	Visit, Board, Search, and Seizure
VHF	Very High Frequency
VTC	Video Teleconferencing
VTOL	Vertical Take Off and Landing
WAN	Wide Area Network
WPAN	Wireless Personal Area Networks

## ACRONYMS

WPNAC	Weapons Accessories
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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 2: Applied Research</i>	PE 1160401BB / <i>SOF Technology Development</i>											
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	588.984	36.230	49.464	44.829	-	44.829	-	-	-	-	-	-
S100: <i>SOF Technology Development</i>	588.984	36.230	49.464	44.829	-	44.829	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This program element enables United States Special Operations Command (USSOCOM) to conduct studies and develop laboratory prototypes for applied research and advanced technology development, as well as leverage other organizations' technology projects that may not otherwise be affordable within MFP-11. Applying small incremental amounts of investments to Department of Defense (DOD), other government agencies, and commercial organizations allows USSOCOM to influence the direction of technology development or the schedule against which it is being pursued, and to acquire disruptive solutions and emerging technologies for Special Operations Forces (SOF). This project provides an investment strategy for USSOCOM to link technology opportunities with capability deficiencies, capability objectives, technology thrust areas, human endurance and sensory performance, and technology development objectives. This investment strategy is aligned to establish future SOF capability in support of Joint Warfighting Concepts.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	37.569	42.464	45.304	-	45.304
Current President's Budget	36.230	49.464	44.829	-	44.829
Total Adjustments	-1.339	7.000	-0.475	-	-0.475
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-5.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	12.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.339	-			
• Other Adjustments	-	-	-0.475	-	-0.475

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S100: *SOF Technology Development*

Congressional Add: *National Consortium for the Study of Terrorism*

Congressional Add: *Sustained Human Performance and Resilience*

Congressional Add Subtotals for Project: S100

FY 2020	FY 2021
-	7.000
-	5.000
-	12.000

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 2: Applied Research</i>		<b>R-1 Program Element (Number/Name)</b> PE 1160401BB / <i>SOF Technology Development</i>	
<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
Congressional Add Totals for all Projects		-	12.000
<b><u>Change Summary Explanation</u></b>			
Funding:			
FY 2020: Net decrease is due to transfer of funds to Small Business Innovative Research (SBIR)/Small Business Technology Transfer (STTR) programs (\$1.339 million).			
FY 2021: Net increase of \$7.000 million is due to a Congressional add for national consortium for the study of terrorism (\$7.000 million), sustained human performance and resilience (\$5.000 million), and a Congressional directed reduction for unjustified growth (-\$5.000 million).			
FY 2022: Net decrease is due to funding made available to support emerging critical Command requirements (\$0.475 million).			
Schedule: None.			
Technical: None.			

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**Exhibit R-2A, RDT&E Project Justification:** PB 2022 United States Special Operations Command **Date:** May 2021

Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 1160401BB / SOF Technology Development				Project (Number/Name) S100 / SOF Technology Development			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S100: SOF Technology Development	588.984	36.230	49.464	44.829	-	44.829	-	-	-	-	-	-

## A. Mission Description and Budget Item Justification

This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11. Small incremental co-investments with Department of Defense (DOD), other government agencies, and commercial organizations allow USSOCOM to influence the schedule and direction of technology developments, emerging technologies, and capabilities for Special Operations Forces (SOF), with significant economies of investment. This USSOCOM investment strategy is used to link technology opportunities with capability deficiencies, capability objective, technology thrust areas, and technology objectives through key stakeholder relationships with DOD and government technology developers. Technology development needs in these areas may be advertised to industry and government research and development agencies via agency announcements and calls for white papers.

## B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2020	FY 2021	FY 2022
<b>Title:</b> SOF Technology Development  <b>Description:</b> This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11. Beginning in FY 2021, this project will continue to exploit and integrate emerging technologies for sensors and surveillance enabling systems. Increases focus on tactical sensors and enabling technologies in support of the Intelligence, Surveillance, and Reconnaissance (ISR) mission set focused leading edge technology, biometric and biotechnology, which is directed towards the development of revolutionary tags, taggants, sensors, communications, and data processing.  <b>FY 2021 Plans:</b> Continue ongoing technology development projects in areas such as, but not limited to: enabling power technologies, signature reduction technologies, high data-rate throughput, and advances in lightweight armor and materials. Advance technologies for combat medical equipment, biotechnologies, tactics, human performance, optics, sensor, information sources, and processing improvements, improves human-machine interfaces and displays, identifies SOF specific machine learning/artificial intelligence, and secure communications. Continue pursuit of methods to reduce operator load and provides advanced protection. Develop technologies for improved and widened window of target engagement (escalation of force), pursue enhancements to technologies that can aid in detection of enemy intentions and status, and continue development and exploration of novel technologies across the electromagnetic spectrum. Continue to exploit and integrate emerging technologies for sensors and surveillance enabling systems. Increase focus on tactical sensors and enabling technologies in support of the ISR mission set. Based upon agreed	17.320	33.389	40.670

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 2	<b>R-1 Program Element (Number/Name)</b> PE 1160401BB / <i>SOF Technology Development</i>	<b>Project (Number/Name)</b> S100 / <i>SOF Technology Development</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<p>technology maturity metrics, transfers successful projects into programs of record. Continue the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes.</p> <p><b>FY 2022 Plans:</b> Continues ongoing technology development projects in areas such as, but not limited to: enabling power technologies, signature reduction technologies, high data-rate throughput, and advances in lightweight armor and materials. Advances technologies for combat medical equipment, biotechnologies, tactics, human performance, optics, sensor, information sources, and processing improvements, improves human-machine interfaces and displays, identifies SOF specific machine learning/artificial intelligence, and secure communications. Continues pursuit of methods to reduce operator load and provides advanced protection. Develops technologies for improved and widened window of target engagement (escalation of force), pursues enhancements to technologies that can aid in detection of enemy intentions and status, and continues development and exploration of novel technologies across the electromagnetic spectrum. Continues to exploit and integrate emerging technologies for sensors and surveillance enabling systems. Increases focus on tactical sensors and enabling technologies in support of the ISR mission set. Based upon agreed technology maturity metrics, transfers successful projects into programs of record. Continues the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$7.281 million is due to an increase in the activities to integrate Artificial Intelligence and Biotechnologies.</p>				
<p><b>Title:</b> Tagging, Tracking, and Locating Technologies (TTL) Project</p> <p><b>Description:</b> TTL funds Applied Research projects identified in the USSOCOM Quick Look Capabilities Based Assessments (QL-CBA). TTL applies Intelligence, Surveillance, and Reconnaissance (ISR) focused leading edge technology, biometric and biotechnology, which is directed towards the development of revolutionary tags, taggants, sensors, communications, and data processing in support of the TTL mission.</p>		15.387	-	-
<p><b>Title:</b> Classified Sub-Project</p> <p><b>Description:</b> Classified Sub-Project (provided under separate cover).</p> <p><b>FY 2021 Plans:</b> Details provided under separate cover.</p> <p><b>FY 2022 Plans:</b> Details provided under separate cover.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b></p>		3.523	4.075	4.159

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 2	<b>R-1 Program Element (Number/Name)</b> PE 1160401BB / <i>SOF Technology Development</i>	<b>Project (Number/Name)</b> S100 / <i>SOF Technology Development</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
Details provided under separate cover.			
<b>Accomplishments/Planned Programs Subtotals</b>		36.230	44.829
	<b>FY 2020</b>	<b>FY 2021</b>	
<b>Congressional Add:</b> National Consortium for the Study of Terrorism	-	7.000	
<b>FY 2021 Plans:</b> Establish Joint Special Operations University (JSOU) Advanced Research efforts for Irregular and Asymmetric Warfare in partnership with OSD Research and Engineering (R&E). Expand the National Consortium for the Study of Terrorism and Responses to Terrorism (START). The START effort will be awarded to the University of Maryland, College Park as the lead for the National Consortium for the Study of Terrorism by June, 2021, using data sets and scientists' findings regarding Irregular and Asymmetric Warfare topics specific to SOF that support integrative statecraft and applied scenario testing. Results of this effort are expected to be completed within eight months after contract award. The deliverable for START is an academic study conducted by a consortium of university-based research entities who will develop a wargame to explore multinational and inter-agency challenges integral to Irregular Warfare conducted by SOF. Upon completion of the applied research effort, the consortium will deliver proposed updates to JSOU's existing curriculum and training programs of instruction and will be incorporated into courses by Academic Year 2022.			
<b>Congressional Add:</b> Sustained Human Performance and Resilience	-	5.000	
<b>FY 2021 Plans:</b> Continue ongoing development of human performance technology development projects, including performance nutrition and supplementation, achieving the results of exercise via alternative methods, maximizing cognitive performance, musculoskeletal injury prediction, sleep restoration, holistic assessment (e.g., physical/cognitive metrics, biomarkers, and genomics), and tracking of exposures throughout a SOF Operator's career. Continue pursuit of methods to reduce operator load and improve human-machine interfaces and displays. Established a detailed spend plan to execute the FY21 Appropriations Add for Sustained Human Performance. Funds will be obligated through a variety of Human Performance contract actions to be completed in June – August 2021. All efforts are expected to be completed within 12-18 months after contract award.			
<b>Congressional Adds Subtotals</b>	-	12.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 1160401BB / SOF Technology Development	Project (Number/Name) S100 / SOF Technology Development
D. Acquisition Strategy N/A		



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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>					<b>R-1 Program Element (Number/Name)</b> PE 1160402BB / <i>SOF Advanced Technology Development</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	1,452.739	95.862	96.861	93.415	-	93.415	-	-	-	-	-	-
S200: <i>Advanced Technology Development</i>	1,371.268	70.356	77.774	74.019	-	74.019	-	-	-	-	-	-
SF101: <i>Engineering Analysis</i>	53.821	21.072	19.087	19.396	-	19.396	-	-	-	-	-	-
S225: <i>Information and Broadcast Systems Adv Tech</i>	27.650	4.434	0.000	0.000	-	0.000	-	-	-	-	-	-

## **A. Mission Description and Budget Item Justification**

Advanced Technology Development (project S200) conducts rapid prototyping and Advanced Technology Demonstrations (ATDs). ATDs provide a means for demonstrating and evaluating the utility of disruptive solutions and emerging/advanced technologies in as realistic an operational environment as possible by Special Operations Forces (SOF) users. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. ATDs also address projects that are a result of unique joint special mission or area-specific needs for which a few-of-a-kind prototypes must be developed on a rapid response basis, or of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase. This USSOCOM ATD investment strategy is aligned to establish future SOF capability in support of Joint Warfighting Concepts.

Engineering Analysis (project SF101) provides rapid response capability for the investigation, evaluation, and demonstration of technologies for SOF platform (ground, air, and maritime) and soldier system-unique requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: sensor integration; enhanced situational awareness; near-real-time intelligence to include data fusion, threat detection and avoidance; electronic support measures for threat geo-location and specific emitter identification; navigation; target detection; weapon performance integration; and future SOF platform and soldier system requirements. Provides additional engineering analysis and testing required to transition items from national forces to theater forces.

Information and Broadcast Systems Advanced Technology (project S225) conducts rapid prototyping, advanced technology demonstrations, and advanced concept technology demonstrations of information and broadcast systems technology. Includes planning, analyzing, evaluating, and production information systems capabilities and distribution/dissemination broadcast systems capabilities. It provides a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by SOF users. This project also integrates efforts with each other and conducts technology demonstrations in conjunction with joint experiments and other assessment events. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. The project also addresses unique, joint special mission or area-specific needs for which prototypes must be developed on a rapid response basis, or are of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command				Date: May 2021	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
0400: Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)		PE 1160402BB I SOF Advanced Technology Development			
B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	99.404	89.072	94.659	-	94.659
Current President's Budget	95.862	96.861	93.415	-	93.415
Total Adjustments	-3.542	7.789	-1.244	-	-1.244
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-2.211			
• Congressional Rescissions	-	-			
• Congressional Adds	-	10.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-3.542	-			
• Other Adjustments	-	-	-1.244	-	-1.244
<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>					
<b>Project:</b> S200: <i>Advanced Technology Development</i>			<b>FY 2020</b>	<b>FY 2021</b>	
Congressional Add: <i>Classified Project</i>			5.787	-	
Congressional Add: <i>Identity Management</i>			-	10.000	
Congressional Add Subtotals for Project: S200			5.787	10.000	
<b>Project:</b> SF101: <i>Engineering Analysis</i>					
Congressional Add: <i>Soldier System Engineering Analysis</i>			4.098	-	
Congressional Add Subtotals for Project: SF101			4.098	-	
Congressional Add Totals for all Projects			9.885	10.000	
<b>Change Summary Explanation</b>					
Funding:					
FY 2020: Net decrease is due to a transfer of funds to Small Business Innovative Research (SBIR)/Small Business Technology Transfer (STTR) programs (-\$3.542 million).					
FY 2021: Net increase of \$7.789 million is due to a Congressional program increase for Identity Management (\$10.000 million), a Congressional directed reduction for inaccurate transfer (-\$2.114 million), and a Defense-Wide mark non-programmatic reduction (-\$0.097 million).					

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)	PE 1160402BB / SOF Advanced Technology Development	
FY 2022: Net decrease of \$1.224 million is due to funding made available to support emerging critical Command requirements.		
Schedule: None.		
Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development				Project (Number/Name) S200 / Advanced Technology Development			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S200: Advanced Technology Development	1,371.268	70.356	77.774	74.019	-	74.019	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

This project provides for rapid prototyping, Advanced Technology Demonstrations (ATDs) and Joint Capability Technology Demonstrations. It is a means for demonstrating and evaluating the utility of emerging/advanced technologies in operationally relevant environments with Special Operations Forces (SOF) users. This project integrates disruptive solutions and emerging technologies and then presents them in technology demonstrations, in conjunction with joint experiments and other assessment events. Evaluation results often facilitate the initiation of new programs and the insertion of appropriate technologies to acquisition programs. This element leverages key stakeholder relationships with DOD and government technology developers to address unique, joint special mission or area-specific needs for which a few rapid prototypes must be developed on a responsive basis, or of sufficient time sensitivity to accelerate prototyping efforts of a normal acquisition program in any phase.

## B. Accomplishments/Planned Programs (\$ in Millions)

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> SOF Special Technology Project	39.650	61.729	67.849
<b>Description:</b> This project integrates emerging technologies and presents them in technology demonstrations, in conjunction with joint experiments and other assessment events. Beginning in FY 2021, this project will continue to exploit and integrate emerging technologies for sensors and surveillance enabling systems. Increases focus on tactical sensors and enabling technologies in support of the Intelligence, Surveillance, and Reconnaissance (ISR) mission set focused leading edge technology, biometric and biotechnology, which is directed towards the development of revolutionary tags, taggants, sensors, communications, and data processing.			
<b>FY 2021 Plans:</b> Continue the development and insertion of technology into existing programs. Technologies include, but are not limited to: reduced signature profiles, improved tailorable lethality weapons and precision strike weapons, assured communications, command and control systems, machine learning/artificial intelligence, optics, sensors, information sources, and situational awareness tools; lightweight armor and materials, power and energy enablers, and technologies that reduce the load of the operator. Continue the development of technologies and materials which support power and energy enablers, and technologies that reduce the load of the operator. Continue development of technologies supporting undersea, ground and air mobility. Evaluate and develop sensors across the electromagnetic spectrum to meet operational requirements. Continue the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Continue to develop sensors, surveillance, network and data management technology to provide tactically relevant situational awareness and point of need. Continue effort for field prototype system incorporating technologies likely to transition			

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command		Date: May 2021		
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development	Project (Number/Name) S200 / Advanced Technology Development		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
to fielded systems. Beginning in FY 2021, this project will continue to exploit and integrate emerging technologies for sensors and surveillance enabling systems. Increase focus on tactical sensors and enabling technologies in support of the ISR mission set focused leading edge technology, biometric and biotechnology, which is directed towards the development of revolutionary tags, taggants, sensors, communications, and data processing. Based upon agreed technology maturity metrics, transfer successful projects into programs of record, and conduct field experimentations at various venues to facilitate technology insertion.  <b>FY 2022 Plans:</b> Continues the development and insertion of technology into existing programs. Technologies include, but are not limited to: reduced signature profiles, improved tailorable lethality weapons and precision strike weapons, assured communications, command and control systems, machine learning/artificial intelligence, optics, sensors, information sources, and situational awareness tools; lightweight armor and materials, power and energy enablers, and technologies that reduce the load of the operator. Continues the development of technologies and materials which support power and energy enablers, and technologies that reduce the load of the operator. Continues development of technologies supporting undersea, ground and air mobility. Evaluates and develops sensors across the electromagnetic spectrum to meet operational requirements. Continues the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Continues to develop sensors, surveillance, network and data management technology to provide tactically relevant situational awareness and point of need. Continues effort for field prototype system incorporating technologies likely to transition to fielded systems. Continues to exploit and integrate emerging technologies for sensors and surveillance enabling systems. Increases focus on tactical sensors and enabling technologies in support of the ISR mission set focused leading edge technology, biometric and biotechnology, which is directed towards the development of revolutionary tags, taggants, sensors, communications, and data processing. Based upon agreed technology maturity metrics, transfers successful projects into programs of record, and conducts field experimentations at various venues to facilitate technology insertion.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$6.120 million is due to an increase in sensor integration activities, artificial intelligence, and enhancing tactically relevant situational awareness capability.				
<b>Title:</b> Tagging, Tracking, and Locating Technologies (TTL) Project  <b>Description:</b> TTL funds SOF unique ATDs identified in the USSOCOM Quick Look Capabilities Based Assessments (QL-CBA). TTL rapidly prototypes and expeditiously transitions projects from laboratory to acquisition Programs of Record/operational use to address SOF capability deficiencies.		19.205	-	-
<b>Title:</b> Classified Project  <b>Description:</b> Classified Project (provided under separate cover).		5.714	6.045	6.170

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 1160402BB / <i>SOF Advanced Technology Development</i>	<b>Project (Number/Name)</b> S200 / <i>Advanced Technology Development</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
<b>FY 2021 Plans:</b> Details provided under separate cover.			
<b>FY 2022 Plans:</b> Details provided under separate cover.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.125 million will be provided under separate cover.			
<b>Accomplishments/Planned Programs Subtotals</b>		64.569	67.774
		<b>FY 2020</b>	<b>FY 2021</b>
<b>Congressional Add:</b> Classified Project		5.787	-
<b>FY 2020 Accomplishments:</b> Details provided under separate cover.			
<b>Congressional Add:</b> Identity Management		-	10.000
<b>FY 2021 Plans:</b> Details provided under separate cover.			
<b>Congressional Adds Subtotals</b>		5.787	10.000
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development				Project (Number/Name) SF101 / Engineering Analysis			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
SF101: Engineering Analysis	53.821	21.072	19.087	19.396	-	19.396	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project provides a rapid response capability to support Special Operations Forces (SOF) platforms (ground, air and maritime), Unmanned Aerial Vehicle (UAV) payload sensors and soldier systems. The purpose is to correct system deficiencies, improve asset life, and enhance mission capability through the means of feasibility studies, analysis of alternatives, pre-developmental risk reduction studies, and engineering analyses. This project provides the engineering required to improve the design and performance integrity of the SOF platforms, UAV payload sensors and soldier support systems, sub-systems, equipment, and embedded computer software as they relate to the maintenance, overhaul, repair, quality assurance, modifications, materiel improvements, and service life extensions. This project also conducts risk reduction studies, analyses, and demonstrations to support emerging, time-critical weapons and sensor enhancements.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2020	FY 2021	FY 2022	
Title: Platform Engineering Analysis									10.526	-	-	
Description: Funding supports the development of rapid response capabilities to support SOF platform and soldier systems. Rapidly addresses technology needs for insertion into Programs of Record. Supports technology development to correct system deficiencies, improve platform asset life, and enhance mission capabilities.												
Title: Soldier System Engineering Analysis									0.483	-	-	
Description: Funding supports engineering assessments and evaluation of technology readiness in the following areas: 1) next generation lightweight low-cost body armor and ballistic helmets 2) ballistic and laser variable light transmission protective eyewear 3) soldier worn sensors to assess ballistic and blast events as well as soldier health 4) next generation soldier worn load carriage systems and 5) soldier worn head borne communications that provide greater situational awareness and hearing protection.												
Title: National to Theater Engineering Analysis									2.158	2.281	2.327	
Description: Provides additional engineering analysis and testing required to transition items from national forces to theater forces.												
FY 2021 Plans: Conduct additional testing and evaluation required on various equipment items such as communications, intelligence, weapons, and operator protection planned for transition to SOF Theater Forces.												
FY 2022 Plans:												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 1160402BB / SOF Advanced Technology Development	<b>Project (Number/Name)</b> SF101 / Engineering Analysis	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
Continues additional testing and evaluation required on various equipment items such as communications, intelligence, weapons, and operator protection planned for transition to SOF Theater Forces.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.046 million is to support additional testing and evaluation required on various equipment items.			
<b>Title:</b> Aviation Mission Improved Survivability  <b>Description:</b> Funding supports engineering analysis activities to address aviation survivability such as signature management, situational awareness, and versatile mission equipment (payloads, communications, and weapons) to achieve SOF mission objectives.		3.807	-
<b>Title:</b> Engineering Analysis  <b>Description:</b> Funding supports the development of rapid response capabilities to support SOF platform and soldier systems. Supports technology development to correct system deficiencies, improve platform asset life, and enhance mission capabilities. Supports engineering assessments and evaluation of technology feasibility, producibility, and integration into next generation soldier equipment. Supports engineering analysis activities to address platform survivability such as signature management, situational awareness, and versatile mission equipment (payloads, communications, and weapons) to achieve SOF mission objectives. Rapidly addresses technology needs for insertion into Programs of Record.  <b>FY 2021 Plans:</b> Begin to assess concepts and prototypes that provide increased capability of SOF mobility platforms to include improvements to meet emerging threats. Assess and evaluate advanced methods to deliver tailorable lethality. Identify, assess, and evaluate improved network and data management systems that incorporate significant improvements to operate in contested environments, systems that improve situational awareness on the battlefield, and disruptive technologies to enable Intelligence, Surveillance, and Reconnaissance (ISR) in future environments. Continue to assess materials, concepts, and prototypes to increase operator effectiveness and situational awareness in all environments. Continue engineering analysis activities to improve SOF platform mission survivability. Activities include, but are not limited to, signature management (acoustic, infrared, radio frequency), situational awareness with full spectrum threat warning and countermeasures, and versatile mission equipment (payloads, communications, and weapons) to improve SOF survivability in less than permissive operating environments.  <b>FY 2022 Plans:</b> Continues to assess concepts and prototypes that provide increased capability of SOF mobility platforms to include improvements to meet emerging threats. Assesses and evaluates advanced methods to deliver tailorable lethality. Identifies, assesses, and evaluates improved network and data management systems that incorporate significant improvements to operate in contested environments, systems that improve situational awareness on the battlefield, and disruptive technologies to enable ISR in future		-	12.806
			13.069



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 1160402BB / SOF Advanced Technology Development	<b>Project (Number/Name)</b> SF101 / Engineering Analysis	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
environments. Continues to assess materials, concepts, and prototypes to increase operator effectiveness and situational awareness in all environments. Continues engineering analysis activities to improve SOF platform mission survivability. Activities include, but are not limited to, signature management (acoustic, infrared, radio frequency), situational awareness with full spectrum threat warning and countermeasures, and versatile mission equipment (payloads, communications, and weapons) to improve SOF survivability in less than permissive operating environments.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.263 million is to support the assessment of concepts and prototypes that provide increased capability of SOF mobility platforms.			
<b>Title:</b> Experimentation Force		-	4.000
<b>Description:</b> Funding supports the integration of technology with operational vignette-based experiments designed to stimulate innovative applications across all domains addressing SOF specific modernization needs.			
<b>FY 2021 Plans:</b> Begin the development of innovative concepts and conducts experimentation to develop hyper-enabled teams capable of conducting globally integrated special operations across all domains.			
<b>FY 2022 Plans:</b> Continues the development of innovative concepts and conducts experimentation to develop hyper-enabled teams capable of conducting globally integrated special operations across all domains.			
<b>Accomplishments/Planned Programs Subtotals</b>		16.974	19.087
		<b>FY 2020</b>	<b>FY 2021</b>
<b>Congressional Add:</b> Soldier System Engineering Analysis		4.098	-
<b>FY 2020 Accomplishments:</b> Continued to assess materials, concepts and prototypes to reduce soldier load and provide increased protection against the latest emerging threats. Evaluated soldier worn sensors and heads up displays for operability within soldier worn components and subsystems. Assessed technology feasibility and integration readiness of next generation load carriage systems such as exoskeletons and load-assist devices. Assessed proofs of concept and technologies for next generation communications systems that integrate situational awareness in all environments.			
<b>Congressional Adds Subtotals</b>		4.098	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 1160402BB / <i>SOF Advanced Technology Development</i>	<b>Project (Number/Name)</b> SF101 / <i>Engineering Analysis</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>Remarks</b>		
<b>D. Acquisition Strategy</b> N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development				Project (Number/Name) S225 / Information and Broadcast Systems Adv Tech			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S225: Information and Broadcast Systems Adv Tech	27.650	4.434	0.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project conducts development, rapid prototyping, and demonstration/testing of information and broadcast system technology. Includes cyber capabilities that predict the best media channels to reach potential target audiences, data mining and information collections tools, propaganda and social behavior analytical tools, cultural analysis tool sets and emerging technologies that support the planning and analytical needs for Military Information Support Operations (MISO) forces. It provides a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by SOF users. This project integrates efforts and conducts technology demonstrations in conjunction with joint experiments and other assessment events and performs market research on emerging technologies that support all phases of MISO. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. The project also addresses unique, joint special mission or area-specific needs. Seeks technologies that will transform current MISO capabilities through two major objectives: 1) Exploit technologies capable of disseminating products to reach target audiences across a variety of media to include audiences in denied areas. 2) Automate and improve MISO planning and analytical capability through technologies that are integrated into SOF planning systems (Cultural Analysis, Targeting, Theme Development, Media & Product Selection, Distribution & Dissemination, and Measures of Effectiveness). Develops software applications that increases the efficiency and shortens the timeline to get MISO dissemination packages approved. Develops hardware/software tools that facilitate the collaboration and sharing of information and other critical data.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Broadcast and Dissemination Modernization	4.434	-	-
<b>Description:</b> Develops emerging technologies available in the marketplace to transform and modernize planning, analysis, development, broadcast, distribution, dissemination, and feedback capabilities for MISO forces. This initiative will also continue development of appropriate emerging technologies initially identified by Advanced Technology Demonstrations and Joint Capability Technology Demonstrations to transition to acquisition programs. Technologies include: multi-frequency broadcast systems; digital broadcast capabilities; remote controlled electronic paper; near-real-time command and control of unattended systems, especially in denied areas; focused/beam speaker sound technologies; visual projection technologies; advanced commercial broadcast technologies including amplitude modulation and frequency modulation radio transmitters and antenna; television transmitter and antenna systems; internet and telephony dissemination and broadcast systems; technologies capable of long-loiter broadcast and delivery in denied and permissive environment; and technologies that automate and improve planning and analytical capability through integrated capabilities.			
<b>Accomplishments/Planned Programs Subtotals</b>	4.434	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 1160402BB / <i>SOF Advanced Technology Development</i>	<b>Project (Number/Name)</b> <i>S225 / Information and Broadcast Systems Adv Tech</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>Remarks</b>		
<b>D. Acquisition Strategy</b> N/A		

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					<b>R-1 Program Element (Number/Name)</b> PE 0305208BB / Distributed Common Ground/Surface Systems							
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	54.930	6.359	6.062	5.994	-	5.994	-	-	-	-	-	-
S400A: Distributed Common Ground/Surface Systems	54.930	6.359	6.062	5.994	-	5.994	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This program element is part of the Military Intelligence Program (MIP). The Distributed Common Ground/Surface System Special Operations Forces (DCGS-SOF) is part of a family of systems providing rapid fielding of Intelligence, Surveillance, and Reconnaissance (ISR) Processing, Exploitation, Dissemination (PED), and analytical capabilities at the Combatant Command (COCOM), Component/Theater Special Operations Commands (TSOC) level and below through a combination of reach back, forward support, and collaboration. The mission tailored infrastructure interconnects the warfighters, analysts, and sensors to find and fix High Value Targets and provides a network-enabled, interoperable construct allowing continual, unimpeded sharing of intelligence data, information and services with SOF and between the Services, national intelligence agencies, combatant commands and multi-national partners. It connects the SOF warfighters and analysts with essential intelligence information and provides situational awareness information to SOF leadership at all echelons. The two components of DCGS-SOF include the following: Enterprise/All Source Information Fusion (ENT/ASIF) provides infrastructure, processing, and intelligence analytical tools to allow for worldwide SOF intelligence information sharing via a globally connected cloud based architecture as well as a forward disconnected capability. SOF Geospatial Intelligence Processing, Exploitation, and Dissemination (SGIP) provides capabilities in garrison and deployed environments for the PED of manned and unmanned sensors. These technologies will be pursued via rapid prototyping efforts when appropriate.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	6.359	6.066	6.179	-	6.179
Current President's Budget	6.359	6.062	5.994	-	5.994
Total Adjustments	0.000	-0.004	-0.185	-	-0.185
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-0.004			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.185	-	-0.185

**Change Summary Explanation**

Funding:

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 0305208BB / Distributed Common Ground/Surface Systems	
FY 2020: None.		
FY 2021: Decrease of \$0.004 million is due to a Defense Wide (DW) non-programmatic reduction.		
FY 2022: Decrease of \$0.185 million is due to a transfer of Silent Dagger (SDAG) funds into PE 1160405BB/Intelligence Systems.		
Schedule: None.		
Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>				Project (Number/Name) S400A / <i>Distributed Common Ground/Surface Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S400A: <i>Distributed Common Ground/Surface Systems</i>	54.930	6.359	6.062	5.994	-	5.994	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This program element is part of the Military Intelligence Program (MIP). The Distributed Common Ground/Surface System Special Operations Forces (DCGS-SOF) is part of a family of systems providing rapid fielding of Intelligence, Surveillance, and Reconnaissance (ISR) Processing, Exploitation, Dissemination (PED), and analytical capabilities at the Combatant Command (COCOM), Component/Theater Special Operations Commands (TSOC) level and below through a combination of reach back, forward support, and collaboration. The mission tailored infrastructure interconnects the warfighters, analysts, and sensors to find and fix High Value Targets and provides a network-enabled, interoperable construct allowing continual, unimpeded sharing of intelligence data, information and services with SOF and between the Services, national intelligence agencies, combatant commands and multi-national partners. It connects the SOF warfighters and analysts with the essential intelligence information and provides situational awareness information to SOF leadership at all echelons. The two components of DCGS-SOF include the following: Enterprise/All Source Information Fusion (ENT/ASIF) provides infrastructure, processing, and intelligence analytical tools to allow for worldwide SOF intelligence information sharing via a globally connected cloud based architecture as well as a forward disconnected capability. SOF Geospatial Intelligence Processing, Exploitation, and Dissemination (SGIP) provides capabilities in garrison and deployed environments for the PED of manned and unmanned sensors. These technologies will be pursued via rapid prototyping efforts when appropriate.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> DCGS	6.359	6.062	5.994
<b>Description:</b> DCGS-SOF is composed of two major components: Enterprise/ASIF and SGIP. DCGS-SOF develops and integrates SOF networks providing USSOCOM with unique decision capabilities to include: measurement and signature data, sensor exploitation, data compressions and man-portable workstations. DCGS-SOF provides the supporting architecture to link the Global Sensor Network to those who will interpret the data for rapid transmission to collaborative partners via the SOF Information Environment (SIE).			
<b>FY 2021 Plans:</b> Continue technology development, integration of emerging technologies and capabilities enhancements for DCGS-SOF ENT/ASIF requirements including but not limited to: Advanced analytics, User Interfaces (UI), cloud computing, machine learning, and disconnected operations capability. Continue technology development, and testing and integration of emerging technologies for SGIP. Continue DCGS-SOF Limited Objective Events and exercise participation to test integration of emerging technologies			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command							<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7				<b>R-1 Program Element (Number/Name)</b> PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>			<b>Project (Number/Name)</b> S400A / <i>Distributed Common Ground/Surface Systems</i>		

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
and obtain user feedback of items in development. Continue interoperability improvements with Coalition partners, Defense Intelligence Information Enterprise (DI2E) framework and Joint Information Environment.			
<b>FY 2022 Plans:</b> Continues technology development, integration of emerging technologies and capabilities enhancements for DCGS-SOF ENT/ASIF requirements including but not limited to: Advanced analytics, User Interfaces (UI), cloud computing, machine learning, and disconnected operations capability. Continues technology development, testing and integration of emerging technologies for SGIP. Continues DCGS-SOF Limited Objective Events and exercise participation to test integration of emerging technologies and obtain user feedback of items in development. Continues tech development and integration of emerging technologies for SGIP.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.068 million is due to funding made available to support emerging critical Command requirements.			
<b>Accomplishments/Planned Programs Subtotals</b>	6.359	6.062	5.994

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/020401INTL: <i>Distributed Common Ground/Surface System</i>	12.522	11.645	5.991	-	5.991	-	-	-	-	-	-
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
DCGS-SOF leverages SOF programs, DOD and Intelligence Community partners, National labs, and other Government Agencies to integrate Commercial Off The Shelf/Government Off The Shelf (COTS/GOTS), and other mature technologies into the Program of Record which will reside partially within the SOF Information Enterprise combined with Web-Client tools in a global cloud. These alliances enable more agile access to (searchable, discoverable) and sharing of larger data domains and services to meet SOF-peculiar documented requirements. The technology allows for seamless integration and federation with DOD, Interagency, and Coalition tactical Intelligence, Surveillance and Reconnaissance (ISR) PED systems. The DCGS-SOF program office employs an agile development process with capability insertions into the development baseline for assessment and future deployment into the operational baseline. All development requirements are prioritized through the DCGS Requirements Working Group (DRWG) chaired by United States Special Operations Command J2. Once approved, the requirements are evaluated and scheduled by engineering development teams. Using this methodology allows capabilities to be inserted in a fast and agile manner based on user requirements and priorities. All Evolutionary Technology Insertions (ETIs) in the R-4 schedule are based on current program office projections. If requirements change based on the DRWG, the ETI and version capabilities identified may change.											



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0305208BB / Distributed Common Ground/Surface Systems					Project (Number/Name) S400A / Distributed Common Ground/Surface Systems				
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development and Integration - Enterprise / All Source Information Fusion (ENT/ASIF)	Various	Various : Various	12.995	1.459	Jul 2020	2.953	Jan 2021	3.732	Jan 2022	-		3.732	Continuing	Continuing	-
Capabilities Modernization - SOF Geospatial Intelligence Processing Exploitation, and Dissemination (SGIP)	Various	Various : Various	17.260	2.500	Jan 2020	0.730	Jan 2021	0.600	Jan 2022	-		0.600	Continuing	Continuing	-
Independent Verification and Validation - SOF Signals Intelligence Processing Exploitation, and Dissemination (SOF SIGINT PED)	MIPR	Various : Various	2.321	0.615	Mar 2020	0.829	Mar 2021	-		-		-	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	1.788	-		-		-		-		-	0.000	1.788	-
Subtotal			34.364	4.574		4.512		4.332		-		4.332	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support (ENT/ASIF)	C/FFP	SITEC : Various	6.723	0.259	Mar 2020	1.100	Mar 2021	1.225	Mar 2022	-		1.225	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	0.576	-		-		-		-		-	0.000	0.576	-
Subtotal			7.299	0.259		1.100		1.225		-		1.225	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0305208BB / Distributed Common Ground/Surface Systems				Project (Number/Name) S400A / Distributed Common Ground/Surface Systems					
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	MIPR	Various : Various	1.956	0.854	Oct 2019	0.150	Oct 2020	0.176	Oct 2021	-		0.176	Continuing	Continuing	-
Independent Verification and Validation	MIPR	Various : Various	3.470	0.210	Oct 2019	-		-		-		-	0.000	3.680	-
Interoperability Support	MIPR	JITC : Ft Huachuca, AZ	2.085	0.232	Feb 2020	0.300	Feb 2021	0.261	Feb 2022	-		0.261	Continuing	Continuing	-
Interoperability Testing	C/FFP	SITEC : Various	5.756	0.230	Mar 2020	-		-		-		-	Continuing	Continuing	-
Subtotal			13.267	1.526		0.450		0.437		-		0.437	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			54.930	6.359		6.062		5.994		-		5.994	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

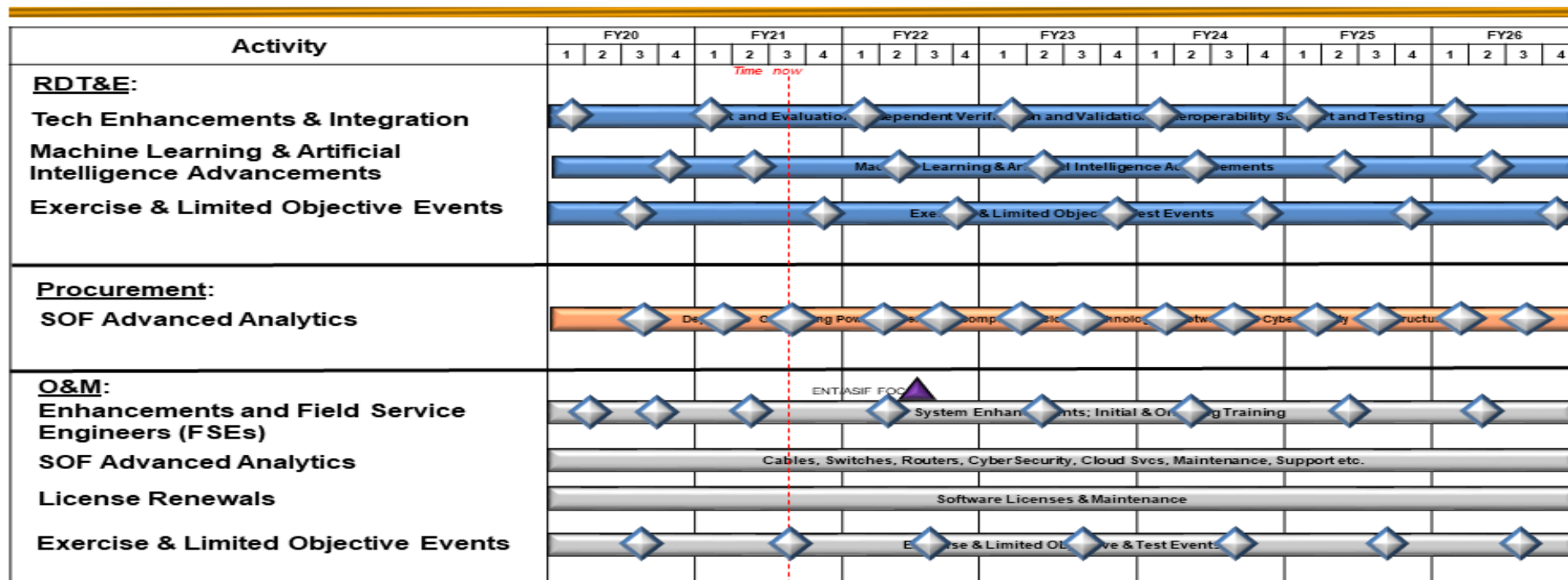
Date: May 2021









Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 0305208BB / Distributed Common Ground/Surface Systems

Project (Number/Name)  
S400A / Distributed Common Ground/Surface Systems

## Distributed Common Ground/Surface Systems-Special Operations Forces (DCGS-SOF) Enterprise/All Source Information Fusion (ENT/ASIF)



 FOC 
  Milestone 
  Contract Award 
  Article Delivery 
  RDT&E 
  Procurement 
  O&M 
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

Appropriation/Budget Activity

0400 / 7

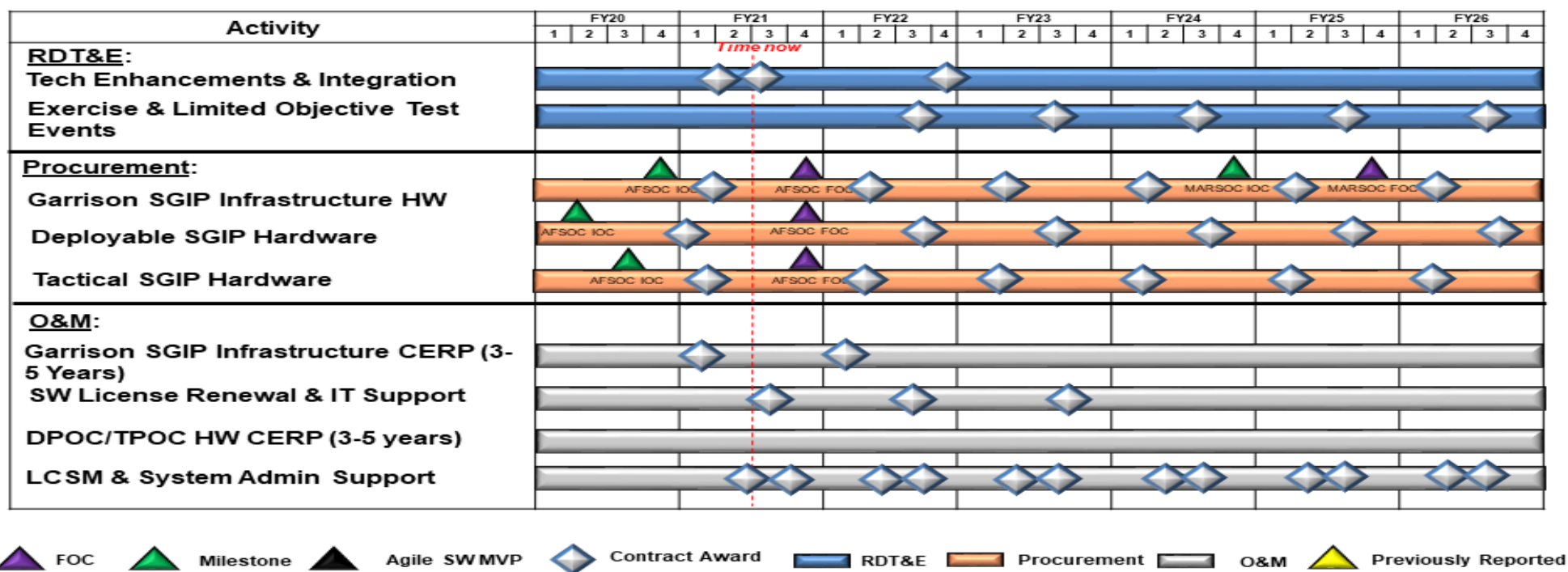
R-1 Program Element (Number/Name)

PE 0305208BB / Distributed Common Ground/Surface Systems

Project (Number/Name)

S400A / Distributed Common Ground/Surface Systems

## DCGS-SOF Geospatial Intelligence Processing, Exploitation and Dissemination (SGIP) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

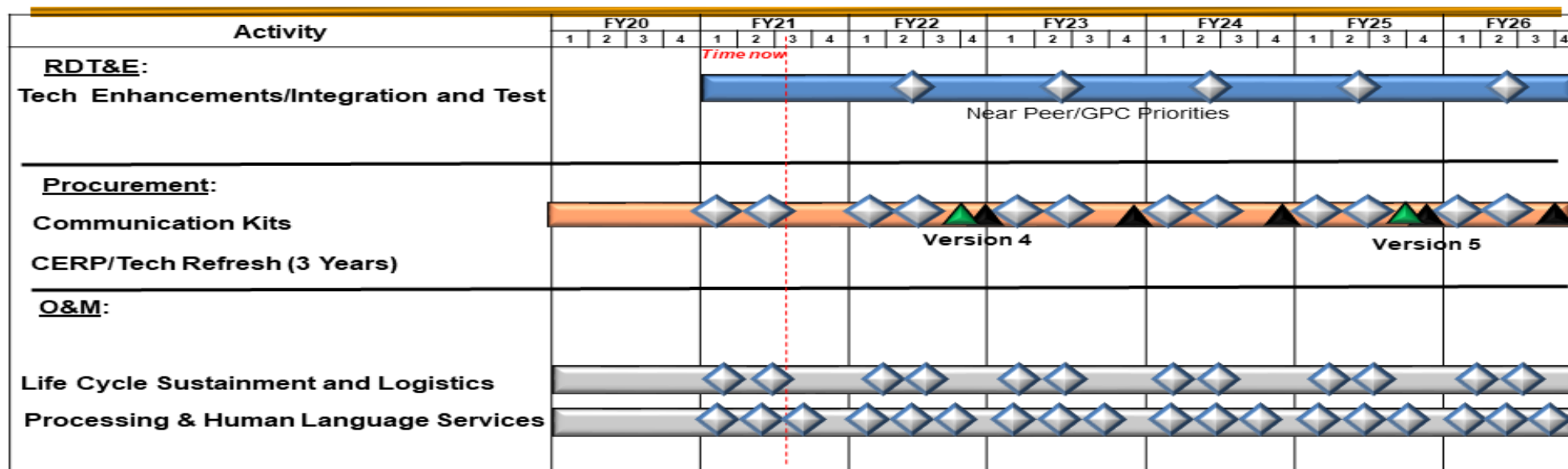
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 0305208BB / Distributed Common Ground/Surface Systems

Project (Number/Name)  
S400A / Distributed Common Ground/Surface Systems

# SOF Signals Intelligence (SIGINT) Silent Dagger (SDAG) Schedule



Note: For FY 2021 and prior, funding was displayed under schedule titled SIGINT PED in PE 0305208BB, Project S400A. Beginning FY 2022, funding is contained in PE 1160405BB Project S400 under schedule titled SDAG.

Note: Exercise & Limited Objective Events are depicted on ENT/ASIF and SGIP schedules.



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Exhibit R-4A, RDT&E Schedule Details: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) S400A / <i>Distributed Common Ground/Surface Systems</i>	

## Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Distributed Common Ground/Surface Systems - Enterprise/ASIF</i></b>				
Tech Enhancements & Integration	1	2020	4	2026
Machine Learning and Artificial Intelligence Advancements	1	2020	4	2026
Exercise & Limited Objective Events	1	2020	4	2026
<b><i>Distributed Common Ground/Surface Systems - SGIP</i></b>				
Tech Enhancements & Integration	1	2020	4	2026
Exercise & Limited Objective Events	1	2020	4	2026

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					<b>R-1 Program Element (Number/Name)</b> PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	131.295	19.960	21.265	19.065	-	19.065	-	-	-	-	-	-
S851: MQ-9 Unmanned Aerial Vehicle (UAV)	131.295	19.960	21.265	19.065	-	19.065	-	-	-	-	-	-

## A. Mission Description and Budget Item Justification

This program element identifies, develops, rapidly prototypes, integrates, and tests Special Operations Forces (SOF)-peculiar mission kits, mission payloads, weapons, and modifications on MQ-9 Unmanned Aerial Vehicles (UAVs), Ground Control Stations (GCSs), and training systems as a component of the Medium Altitude Long Endurance Tactical (MALET) program. United States Special Operations Command (USSOCOM) is designated as the DOD lead for planning, synchronizing, and as directed, executing global operations against terrorist networks. USSOCOM requires the capability to find, fix, finish, exploit, and analyze time-sensitive high-value targets. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This program element addresses the primary areas of Intelligence, Surveillance, Reconnaissance, and Target (ISR&T) Acquisition, and Strike. These technologies will be pursued via rapid prototyping efforts when appropriate.

The FY 2022 funding request was reduced by \$0.381 million to account for the availability of prior year execution balances.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	20.697	21.265	19.446	-	19.446
Current President's Budget	19.960	21.265	19.065	-	19.065
Total Adjustments	-0.737	0.000	-0.381	-	-0.381
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.737	-			
• Other Adjustments	-	-	-0.381	-	-0.381

## Change Summary Explanation

Funding:

FY 2020: Decrease of \$0.737 million is due to a transfer to Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) programs.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)	
FY 2021: None.		
FY 2022: The FY 2022 funding request was reduced by \$0.381 million to account for the availability of prior year execution balances.		
Schedule: None.		
Technical: None.		



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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)				Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S851: MQ-9 Unmanned Aerial Vehicle (UAV)	131.295	19.960	21.265	19.065	-	19.065	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

As the supported combatant command in global operations, United States Special Operations Command (USSOCOM) requires the capability to find, fix, finish, exploit, and analyze time-sensitive high-value targets. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This project addresses the primary areas of Intelligence, Surveillance, Reconnaissance, and Target (ISR&T) Acquisition and Strike. The majority of the developmental funds provides for the Operational Flight Program (OFP) Software for the aircraft, Ground Control Station (GCS), and Turret. Special Operations Forces (SOF) peculiar modifications to the OFP allow for a rapid integration of emerging capabilities in order to maintain relevance and dominance of the MQ-9 in support of the Interim National Security Strategy Guidance (INSSG).

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> MQ-9 Unmanned Aerial Vehicles (UAVs)	19.960	21.265	19.065
<b>Description:</b> Identifies, develops, integrates, and tests SOF-peculiar mission kits, mission payloads, weapons, and modifications on MQ-9 UAVs, GCSs, and training systems.			
<b>FY 2021 Plans:</b> Develop, test, and integrate SOF-peculiar emerging technology mission kits, mission payloads, weapons and modifications on MQ-9 UAVs, GCSs, and training systems.			
<b>FY 2022 Plans:</b> Develops, tests, and integrates SOF-peculiar emerging technology mission kits, mission payloads, weapons and modifications on MQ-9 UAVs, GCSs, and training systems.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$2.200 million is due to completion of MQ-9 Global Positioning System (GPS) Hardening development efforts in FY21.			
<b>Accomplishments/Planned Programs Subtotals</b>	19.960	21.265	19.065

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)	Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)	

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/1108MQ9: MQ-9 Unmanned Aerial Vehicle	7.238	6.746	8.020	-	8.020	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

MQ-9 UAV implements an agile acquisition approach for the MQ-9 aircraft, GCS and Electro-Optical/Infrared (EO/IR) turret sensor OFP software development. The MQ-9 UAV provides rapid prototyping activities and technology maturation events in order to increase first pass lethality. Contract types include a mix of cost type and fixed priced. Proprietary issues with the aircraft, GCS and sensor software as well as aircraft modification may require sole source contracting to the original equipment manufacturer. MQ-9 UAV leverages service common Contractor Logistics Support (CLS) contracts for aircraft and ancillary equipment sustainment.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)					Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)				
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MQ-9 UAVs, Ground Control Stations, and Training Systems	SS/ Various	General Atomics Aeronautical Services : San Diego, CA	78.358	15.801	Apr 2020	16.992	Feb 2021	15.176	Feb 2022	-		15.176	Continuing	Continuing	-
MQ-9 UAVs, Ground Control Stations, and Training Systems	SS/ Various	Raytheon : McKinney, TX	11.237	1.456	Apr 2020	1.496	Feb 2021	1.361	Feb 2022	-		1.361	Continuing	Continuing	-
Prior Years Completed Projects	Various	Various : Various	15.891	-		-		-		-		-	0.000	15.891	-
Subtotal			105.486	17.257		18.488		16.537		-		16.537	Continuing	Continuing	N/A
Remarks															
Indefinite Delivery, Indefinite Quantity (IDIQ) contract awards every two years for MQ-9 UAVs, Ground Control Stations, and Training Systems															
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MQ-9 UAVs, Ground Control Stations, and Training Systems	SS/ Various	General Atomics Aeronautical Services : San Diego, CA	20.509	2.703	Apr 2020	2.777	Feb 2021	2.528	Feb 2022	-		2.528	Continuing	Continuing	-
Prior Years Completed Projects	Various	Various : Various	5.300	-		-		-		-		-	0.000	5.300	-
Subtotal			25.809	2.703		2.777		2.528		-		2.528	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			131.295	19.960		21.265		19.065		-		19.065	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

Appropriation/Budget Activity

0400 / 7

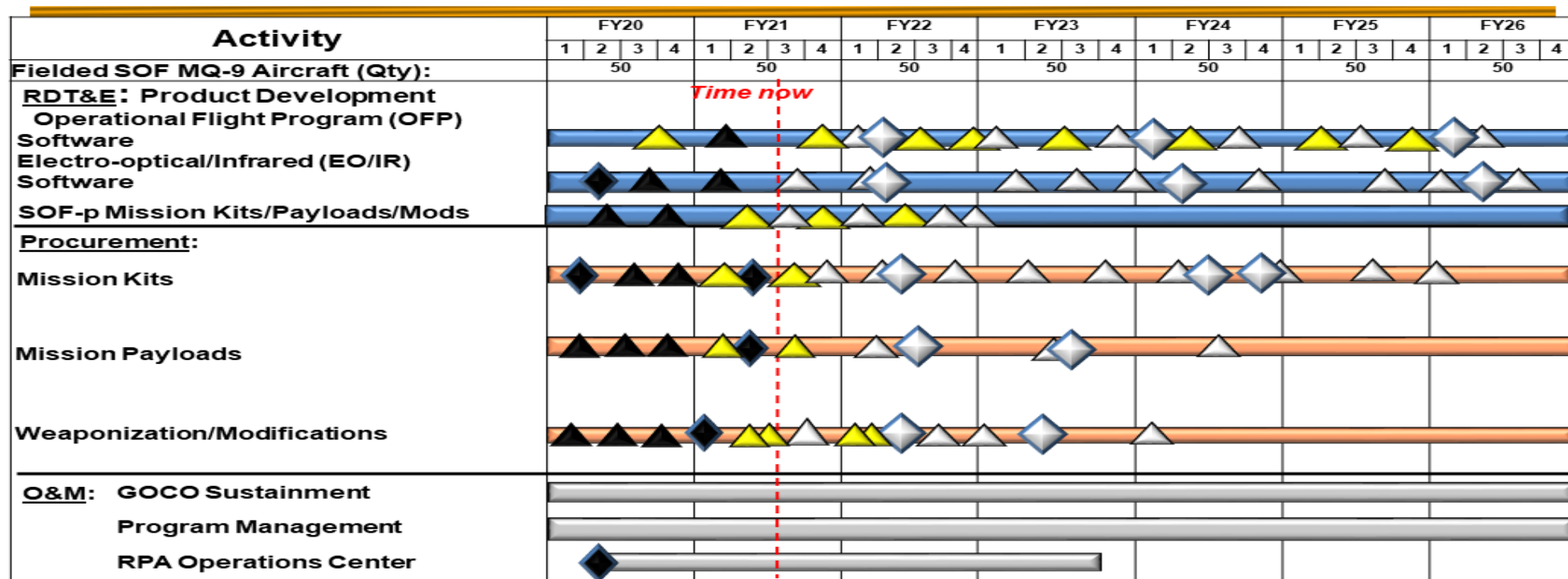
R-1 Program Element (Number/Name)

PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)

Project (Number/Name)

S851 / MQ-9 Unmanned Aerial Vehicle (UAV)

## MALET – MQ9 Schedule



 Article Award
  Article Delivery
  RDT&E
  Procurement
  O&M
  Previously Reported

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)	<b>Project (Number/Name)</b> S851 / MQ-9 Unmanned Aerial Vehicle (UAV)	

## Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>MQ-9 Unmanned Aerial Vehicles, Ground Control Stations (GCSs), and Training Systems Product Development</i></b>				
Operational Flight Program (OFP) Software (SW)	1	2020	4	2026
Electro-optical/Infrared (EO/IR) SW	1	2020	4	2026
SOF-p Mission Kits/Payloads/Mods	1	2020	4	2026

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	262.717	27.278	0.000	0.000	-	0.000	-	-	-	-	-	-
S050: <i>Small Business Innovation Research</i>	250.265	23.915	0.000	0.000	-	0.000	-	-	-	-	-	-
S051: <i>Small Business Technology Transfer</i>	12.452	3.363	0.000	0.000	-	0.000	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This program element consists of a highly competitive three-phase award system that provides qualified small businesses with the opportunity to propose high quality innovative ideas that meet specific research and development needs of United States Special Operations Command (USSOCOM). Small Business Innovation Research (SBIR) is a result of the Small Business Development Act of 1992. It was enacted by Congress in Public Law 97-219, reenacted by Public Law 99-443, and reauthorized by the SBIR Program Reauthorization Act of 2012. Starting in FY 1994, the SBIR program was refocused toward dual use and defense reinvestment efforts. Phase I projects evaluate the scientific merit and feasibility of an idea. Phase II projects expand the results of, and further pursue, the developments of Phase I. Phase III commercializes the results of Phase II and requires the use of private or non-SBIR federal funding. USSOCOM participates annually in the DOD Request for Proposal (RFP) process. USSOCOM then awards its proposed SBIR projects. FY 2014 was the first year USSOCOM participated in the Small Business Technology Transfer (STTR) program. The STTR goal is similar to the SBIR program, but the STTR program additionally seeks to expand public/private sector partnerships between small business and nonprofit United States research institutions.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	27.278	0.000	0.000	-	0.000
Total Adjustments	27.278	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	27.278	-			

**Change Summary Explanation**

Funding:

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 1160279BB / Small Business Innovation Research/Small Bus Tech Transfer	
FY 2020: Net increase of \$27.278 million is due to reprogramming from various program elements for the congressionally mandated SBIR (\$23.915 million) and STTR (\$3.363 million) programs.		
FY 2021: None.		
FY 2022: None.		
Schedule: None.		
Technical: None.		



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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160279BB / Small Business Innovation Research/Small Bus Tech Transfer				Project (Number/Name) S050 / Small Business Innovation Research			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S050: Small Business Innovation Research	250.265	23.915	0.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project consists of a highly competitive three-phase award system that provides qualified small businesses with the opportunity to propose high quality innovative ideas that meet specific research and development needs of United States Special Operations Command (USSOCOM). Small Business Innovation Research (SBIR) is a result of the Small Business Development Act of 1992. It was enacted by Congress in Public Law 97-219, reenacted by Public Law 99-443, and reauthorized by the SBIR Program Reauthorization Act of 2012. Starting in FY 1994, the SBIR program was refocused toward dual use and defense reinvestment efforts. Phase I projects evaluate the scientific technical merit and feasibility of an idea. Phase II projects expand the results of, and further pursue, the developments of Phase I. Phase III commercializes the results of Phase II and requires the use of private or non-SBIR federal funding. USSOCOM participates annually in the DOD Request for Proposal process. USSOCOM then awards its proposed SBIR projects.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Small Business Innovation Research (SBIR)	23.915	-	-
<b>Accomplishments/Planned Programs Subtotals</b>	23.915	-	-

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

SBIR is a three-phase program that provides early-stage Research and Development (R&D) to small companies. Eligible projects must fulfill an R&D need identified by DOD and have the potential to be developed into a product or service for commercial or defense markets. SBIR is designed to stimulate technological innovation, increase private sector commercialization of federal R&D, increase small business participation in federally funded R&D, and foster participation by minority and disadvantaged firms in technological innovation.

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**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>	<b>Project (Number/Name)</b> S050 / <i>Small Business Innovation Research</i>
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost		Cost To Complete	Total Cost	Target Value of Contract
Phase I <\$150K	C/Various	Various : Various	29.332	14.349	Sep 2020	-		-		-		-		Continuing	Continuing	-
Phase II >\$750K	C/Various	Various : Various	22.422	9.566	Sep 2021	-		-		-		-		Continuing	Continuing	-
Prior Year Funding	C/Various	Various : Various	198.511	-		-		-		-		-		0.000	198.511	-
<b>Subtotal</b>			250.265	23.915		-		-		-		-		Continuing	Continuing	N/A

**Remarks**

	<b>Prior Years</b>	<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022 Base</b>		<b>FY 2022 OCO</b>		<b>FY 2022 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	250.265	23.915		0.000		-		-		-	Continuing	Continuing	N/A

**Remarks**

Due to multiple awards, the dates listed above reflect the last Phase I and II awarded.

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2022 United States Special Operations Command										<b>Date:</b> May 2021			
<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>					<b>Project (Number/Name)</b> S050 / <i>Small Business Innovation Research</i>			

	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b><i>Small Business Innovative Research (SBIR)</i></b>																												
Phase I Efforts																												
Phase II Efforts																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>	<b>Project (Number/Name)</b> S050 / <i>Small Business Innovation Research</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Small Business Innovative Research (SBIR)</i></b>				
Phase I Efforts	1	2020	4	2020
Phase II Efforts	2	2020	4	2021

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command										<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>				<b>Project (Number/Name)</b> S051 / <i>Small Business Technology Transfer</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
S051: <i>Small Business Technology Transfer</i>	12.452	3.363	0.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**  
 Small Business Technology Transfer (STTR) goal is to expand public/private sector partnerships between small business and nonprofit United States (U.S.) research institutions.

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Small Business Technology Transfer (STTR)	3.363	-	-
<b>Accomplishments/Planned Programs Subtotals</b>	3.363	-	-

**C. Other Program Funding Summary (\$ in Millions)**  
 N/A

**Remarks**

**D. Acquisition Strategy**  
 STTR provides early-stage Research and Development (R&D) funding directly to small companies working cooperatively with researchers at universities and other research institutions. STTR is also a three-phased program designed to stimulate technological innovation, increase private sector commercialization of federal R&D, increase small business participation in federally funded R&D, and foster participation by minority and disadvantaged firms in technological innovation.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160279BB / Small Business Innovation Research/Small Bus Tech Transfer						Project (Number/Name) S051 / Small Business Technology Transfer			
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Small Business Technology Transfer (STTR) Phase I <\$150K	C/FFP	Various Vendors : Various Locations	4.750	1.850	Sep 2020	-		-		-		-	Continuing	Continuing	-
STTR Phase II >\$750K	C/Various	Various Vendors : Various Locations	2.579	1.513	Sep 2021	-		-		-		-	Continuing	Continuing	-
Prior Year Funding	C/Various	Various : Various	5.123	-		-		-		-		-	0.000	5.123	-
Subtotal			12.452	3.363		-		-		-		-	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			12.452	3.363		0.000		-		-		-	Continuing	Continuing	N/A
Remarks															
Due to multiple awards, the dates listed above reflect the last Phase I and II awarded.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity						R-1 Program Element (Number/Name)						Project (Number/Name)			
0400 / 7						PE 1160279BB / Small Business Innovation Research/Small Bus Tech Transfer						S051 / Small Business Technology Transfer			

	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Small Business Technology Transfer (STTR)																												
STTR Phase I Efforts																												
STTR Phase II Efforts																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>	<b>Project (Number/Name)</b> S051 / <i>Small Business Technology Transfer</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Small Business Technology Transfer (STTR)</i></b>				
STTR Phase I Efforts	1	2020	4	2020
STTR Phase II Efforts	2	2020	4	2021



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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	1,703.529	256.658	250.623	173.537	-	173.537	-	-	-	-	-	-
SF100: <i>Aviation Systems Advanced Development</i>	1,294.610	152.192	102.280	38.594	-	38.594	-	-	-	-	-	-
SF200: CV-22	43.280	23.931	16.773	6.932	-	6.932	-	-	-	-	-	-
SF300: <i>Armed Overwatch/ Targeting</i>	0.000	0.000	25.000	22.952	-	22.952	-	-	-	-	-	-
S750: <i>Mission Training and Preparation Systems</i>	43.159	8.289	9.623	10.227	-	10.227	-	-	-	-	-	-
S875: <i>AC/MC-130J</i>	68.228	28.094	55.083	52.045	-	52.045	-	-	-	-	-	-
D615: <i>Rotary Wing Aviation</i>	254.252	44.152	41.864	42.787	-	42.787	-	-	-	-	-	-

**Program MDAP/MAIS Code:**  
**Project MDAP/MAIS Code(s):** 212

**A. Mission Description and Budget Item Justification**

SF100 Aviation Systems Advanced Development:

This project provides for the development, rapid prototyping, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF) - unique aviation and training requirements. Timely application of SOF- unique technology is critical and necessary to meet requirements in such areas as: SOF common avionics; SOF Common Terrain Following/Terrain Avoidance (TF/TA) radar, best known as Silent Knight Radar (SKR) or AN/APQ-187; Defensive Countermeasures; Electronic Warfare (EW) - Radio Frequency Countermeasures (RFCM); Precision Strike Package (PSP); PSP High Energy Laser (HEL); AC-130H/W/U and MC-130E/ H/P Recapitalization, and other SOF airborne platforms; digital terrain elevation data and electronic order of battle; digital maps; Tactical Mission Networking (TMN), formerly known as Airborne Mission Networking (AbMN); near real-time Intelligence, Surveillance and Reconnaissance (ISR); data fusion; threat detection and avoidance; navigation, target detection, and identification technologies; weapons integration; digital broadcast capabilities; aerial refueling; survivability; mission systems automation and ISR payload technological improvements with size, weight, power and integration onto all SOF unmanned aircraft system (UAS) ISR platforms.

SF200 CV-22 Development/Test and Evaluation:

The CV-22 is a SOF variant of the V-22 vertical medium lift, multi-mission aircraft. The CV-22 project provides long range, high speed, infiltration (infil), exfiltration (exfil), and resupply to SOF teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by other existing aircraft. The funding in this project supports integration, design, development, rapid prototyping, and test to provide improved capabilities to include, but not limited to, more robust performance in situational awareness, ISR, weapons, avionics, SOF communications, defensive/survivability systems, interoperability, speed and maneuverability, mission deployment and improved reliability and maintainability of the CV platform. CV-22 SOF Common TF/TA SKR provides long-range, night/adverse weather, clandestine penetration of medium-to-high threat areas to infil, exfil, and resupply SOF forces. Provides a more sustainable/capable replacement to the obsolescing and technology limited

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>		<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>
<p>TF/TA AN/APQ-174/186 Multi-Mode Radar (MMR). The Full-azimuth Defensive Weapon System (FDWS), in combination with the ramp-mounted gun, provides a ~360 degree field of fire to suppress/eliminate enemy targets. The FDWS integrates the fielded GAU-17 belly gun system currently employed on the United States Marine Corps (USMC) MV-22 aircraft with the SOF peculiar Color Helmet Mounted Display (CHMD) and cockpit firing controls for pilot operation. CV-22 Reliability Improvements designs, integrates, tests and validates system, and sub-system, reliability improvement enhancements to meet required aircraft availability and operational requirements. This incremental development will accelerate the fielding and retrofit of system design improvements directly increasing CV-22 fleet readiness and aircraft availability.</p> <p>SF300: Armed Overwatch: Armed Overwatch provides SOF with deployable, affordable, and sustainable aircraft systems capable of executing Close Air Support (CAS), Precision Strike, and Armed Intelligence, Surveillance &amp; Reconnaissance (Armed ISR) requirements in austere and permissive environments for use in Irregular Warfare operations in support of the National Security Strategic Guidance. The funding in this project supports integration, and testing of SOF-unique capabilities and Aircraft Certification efforts.</p> <p>S750 Mission Training and Preparation Systems: The Special Operations Mission Planning and Execution (SOMPE) project funds the definition, design, development, rapid prototyping, integration, and testing of SOMPE systems to support mission planning, rehearsal, and execution requirements to meet SOF-unique mission requirements and correct deficiencies in current mission planning, rehearsal, and execution capabilities. The Mission Training and Preparation Systems project also includes program management, systems engineering, configuration management, architecture development, risk reduction, and trade study initiatives, as well as initiatives to assure interoperability and commonality between diverse mission planning, rehearsal, and execution systems.</p> <p>S875 AC/MC-130J: The AC/MC-130J project funds core SOF-unique modifications to replace aging/retired AC-130H Spectre, AC-130W Stinger II, AC-130U Spooky, MC-130E Combat Talon I, MC-130P Combat Shadow, MC-130H Combat Talon II aircraft. The 8 AC-130H Spectre, 12 AC-130W Stinger II and 17 AC-130U Spooky airframes will be replaced with MC-130J aircraft modified with the PSP to achieve the AC-130J configuration. The AC-130J aircraft will provide close air support, air interdiction, and armed reconnaissance capability. The 14 MC-130E Combat Talon I, 23 MC-130P Combat Shadow, and 24 MC-130H Combat Talon II airframes will be replaced by MC-130J Commando II aircraft with SOF mission modifications. The MC-130J Commando II aircraft provide clandestine single or multi-ship low-level aerial refueling for special operations helicopters and CV-22 aircraft; and conducts airdrops of leaflets, small special operations teams, resupply bundles, and combat rubber raiding craft. The Air Force procures and fields the basic aircraft, common support equipment, and trainers for United States Special Operations Command (USSOCOM). Incremental upgrade and agile software delivery approaches will be used to rapidly prototype, integrate and mature SOF capabilities onto the aircraft. SOF capabilities include, but are not limited to: AbMN, data fusion, threat detection and avoidance, integrated terrain following/terrain avoidance, electronic warfare, and embedded training. Integrating and automating SOF mission systems that deliver these capabilities is critical to fielding SOF-capable AC/MC-130J aircraft to recapitalize Air Force Special Operations Command's (AFSOC) legacy C-130 fleet.</p> <p>D615 Rotary Wing Aviation: This project provides for the development, rapid prototyping, demonstration, and integration of current and maturing technologies for SOF-unique rotary wing aviation and training requirements. This project includes modifications to Aircraft Survivability Equipment (ASE), avionics, and weapons systems to counter rapidly emerging</p>		

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threats, address cyber security, improve lethality and enhance aircraft self-protection in contested environments. Efforts include aircraft sensor data fusion via a common mission processor to create a one world model that serves as a central node for multi-application capability with potential growth in the areas of situational awareness, safety, lethality, and survivability and cross platform synergy. Rotary wing aircraft supported by this project include: MH-60M, MH-47G, A/MH-6, and Future Vertical Lift (FVL). These aircraft provide aviation support to SOF in worldwide contingency operations and low-intensity conflicts. They must be capable of rapid deployment, undetected penetration of hostile areas, and operations at extended ranges under adverse weather conditions to infiltrate, provide logistics for, reinforce, and extract SOF in the multi-domain operations (MDO) environments and against near peer threats. The anti-access/area denial (A2/AD) threat is characterized by an extensive and sophisticated ground based air defense system and an upgraded air-to-air capability targeted against helicopters.

These technologies will be pursued via rapid prototyping efforts when appropriate.

The FY 2022 funding request was reduced by \$9.492 million to account for the availability of prior execution balances.

FY 2022 Fiscal Balancing: -\$1.323 million decrease is attributed to the reductions necessary to accommodate budget realities and directed strategy driven changes. Reduces development and testing of the next generation Mission Planning Software suite.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	267.695	230.812	144.939	-	144.939
Current President's Budget	256.658	250.623	173.537	-	173.537
Total Adjustments	-11.037	19.811	28.598	-	28.598
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-0.189			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	20.000			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-9.253	-			
• Other Adjustments	-1.784	-	28.598	-	28.598

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** SF100: *Aviation Systems Advanced Development*

Congressional Add: *Classified Project*

Congressional Add Subtotals for Project: SF100

**Project:** D615: *Rotary Wing Aviation*

Congressional Add: *Future Vertical Lift (FVL)*

<b>FY 2020</b>	<b>FY 2021</b>
8.000	-
8.000	-
7.715	-

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<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
Congressional Add Subtotals for Project: D615		7.715	-
Congressional Add Totals for all Projects		15.715	-
<b><u>Change Summary Explanation</u></b>			
Funding:			
FY 2020: Net decrease of \$11.037 million is due to transfer of funds to Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) reductions (-\$9.253 million); increase to Degraded Visual Environment (DVE) for (\$0.086 million), increase TF/TA radar for (\$0.130 million) and decrease of funding to ASE due to transfer of funds to Digital Ecosystems to address emerging threats (-\$2.000 million).			
FY 2021: Net increase of \$19.811 million is due to a Congressional directed transfer to Armed Overwatch RDT&E (\$20.000 million) and an undistributed Congressional reduction (-\$0.189 million).			
FY 2022: Net increase of \$28.598 million is due to the following: an increase for the continued development of ASE enhancements required to counter emerging threats (\$7.065 million); an increase in Future Vertical Lift (FVL) to continue early engineering analysis for SOF Modifications to Future Long Range Assault Aircraft (FLRAA) and Future Attack Reconnaissance Aircraft (FARA) (\$5.803 million); RFCM fact of life scope increase as the program transitions to spiral development of future system enhancements (\$2.452 million); an increase for the High Energy Laser (HEL) to complete AHSL lab integration and ground testing in FY 2022 (\$1.490 million); an increase in Armed Overwatch for the integration and testing of SOF-unique capabilities and aircraft certification efforts (\$22.952 million); an increase in SOMPE for the integration of XPlan core and tactical applications capabilities into the TAK product line for efficiency, common interface, common training and cost savings (\$0.679 million); a decrease in CV-22 due to transition into final phases of integration/testing of CV-22 SOF Common TF/TA SKR Operational Flight Program software development and integration (-\$2.702 million); and a decrease was made available to support emerging critical Command requirements (-\$9.141 million).			
Schedule: None.			
Technical: None.			

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF100 / Aviation Systems Advanced Development			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
SF100: Aviation Systems Advanced Development	1,294.610	152.192	102.280	38.594	-	38.594	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

This project provides for the development, rapid prototyping, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation and training requirements. Timely application of SOF Common technology is critical and necessary to meet requirements in such areas as: SOF common avionics; SOF Common Terrain Following/Terrain Avoidance (TF/TA) radar, best known as Silent Knight Radar (SKR) or AN/APQ-187; Defensive Countermeasures DCM); Electronic Warfare (EW) - Radio Frequency Countermeasures (RFCM); Precision Strike Package (PSP); PSP High Energy Laser (HEL); AC-130H/W/U and MC-130E/H/P Recapitalization, and other SOF airborne platforms; digital terrain elevation data and electronic order of battle; digital maps; Tactical Mission Networking (TMN), formerly known as Airborne Mission Networking (AbMN); near real-time Intelligence, Surveillance and Reconnaissance (ISR); data fusion; threat detection and avoidance; navigation, target detection, and identification technologies; weapons integration; digital broadcast capabilities; aerial refueling; survivability; mission systems automation and ISR payload technological improvements with size, weight, power and integration onto all SOF Unmanned Aircraft System (UAS) ISR platforms.

## B. Accomplishments/Planned Programs (\$ in Millions)

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> EW – RFCM	49.245	52.783	21.605
<b>Description:</b> EW-RFCM supports development, integration, and test activities to provide EW capability against Radio Frequency (RF) threats for SOF-unique AC/MC-130J aircraft. The RFCM system is part of the DCM suite that provides situational awareness and threat response processing required for SOF missions.			
<b>FY 2021 Plans:</b> Begin first test kit installations of new RFCM system for AC-130J and MC-130J aircraft, interoperability design with MC-130J SOF Common TF/TA Radar, and begin system developmental test. Continue aircraft integration, system qualification, and software deficiency resolution.			
<b>FY 2022 Plans:</b> Continues aircraft integration and interoperability activities, system qualification, deficiency resolution and system developmental test. Begins system operational test on the AC-130J and MC-130J aircraft. Also, begins Spiral One activities design to increase RFCM capabilities to meet emerging threats.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b>			

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<b>Appropriation/Budget Activity</b> 0400 / 7		<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / Aviation Systems		<b>Project (Number/Name)</b> SF100 / Aviation Systems Advanced Development	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Decrease of \$31.1781 million is due to transition from system development and integration to test support on the prime Engineering, Manufacturing, and Development (EMD) contract, and emerging critical Command requirements.					
<b>Title:</b> PSP for SOF  <b>Description:</b> PSP for SOF supports systems engineering, analysis, development, and enhancement of the baseline PSP and integration, installation, and test on host MC-130J aircraft provided by the U.S. Air Force for the AC-130H, AC-130W and AC-130U recapitalization, as well as current SOF AC-130Js, AC-130Ws, and other SOF platforms. Missions for the AC-130 aircraft include, but are not limited to, Close Air Support, Air Interdiction, and Armed Reconnaissance. PSP is modular, scalable, and platform neutral.  <b>FY 2021 Plans:</b> Complete development, integration, test, and system improvement of the PSP, to include defensive systems, EO/IR sensors, Alternate Position, Navigation, and Timing, and special mission processor capabilities on SOF C-130s and other SOF aircraft.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$4.629 million was made available to support emerging critical Command requirements.			29.512	4.629	-
<b>Title:</b> PSP HEL  <b>Description:</b> The HEL effort leverages a rapid prototyping approach to demonstrate integration of a laser weapon system onto an AC-130J aircraft. Utilizing a best of breed approach, it integrates laser, beam control, power and thermal subsystems via a government lead system integrator. This provides additional flexibility for rapid prototyping and future modifications.  <b>FY 2021 Plans:</b> Complete subsystems production and deliver to government integration. Begin government integration and ground testing of HEL subsystems'. Continue flight test planning for FY 2023 demonstration.  <b>FY 2022 Plans:</b> Completes delivery of HEL subsystems. Continues government integration and ground testing. Begins flight testing.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$12.187 million is due to the completion of integration/ground testing expected completion in 2nd Qtr FY 2022.			26.256	24.195	12.008
<b>Title:</b> C-130 SOF Common TF/TA SKR  <b>Description:</b> C-130 SOF Common TF/TA (Silent Knight) radar supports integration and test of a TF/TA radar and on-board processor to provide a multi-mode terrain following capability on MC-130J aircraft. Crew systems integration efforts include modifications to aircraft controls and displays to automate TF/TA flight management and reduce pilot, copilot and Combat			31.365	12.456	-

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
Systems Officer workload during missions previously performed by five aircrew members on legacy MC-130 tankers and penetrators.			
<b>FY 2021 Plans:</b> Complete MC-130J TF/TA developmental flight test and integration testing on aircraft modified with SOF Common TF/TA radar. Continue development and interoperability testing on MC-130J TF/TA systems, electronic warfare systems, and airborne mission networking systems. Train AFSOC aircrews on an MC-130J modified with a SOF Common TF/TA SKR for operational testing. Resolve deficiencies reported during developmental or operational flight testing.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$12.456 million is due to completing development and interoperability testing.			
<b>Title:</b> MH-47/MH-60 SOF Common TF/TA SKR  <b>Description:</b> MH-47/MH-60 SOF Common TF/TA SKR supports continuing capability enhancements, testing, and qualification of the TF/TA Low Probability of Intercept and Low Probability of Detection (LPI/LPD) radar to defeat advanced passive detection threats while maintaining safe TF capabilities.		5.668	2.362
<b>FY 2021 Plans:</b> Continue software spiral efforts to include design, development, integration, and testing of SOF Common TF/TA SKR to reduce Terrain Following signature, improve Aircraft Survivability Equipment (ASE) interoperability support, sensor fusion initiatives, and increase reliability.			
<b>FY 2022 Plans:</b> Continues software spiral efforts to include design, development, integration, and testing of SOF Common TF/TA SKR to reduce Terrain Following signature, support data fusion initiatives, and increase reliability.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.267 million was made available to support emerging critical Command requirements.			
<b>Title:</b> ISR Payload  <b>Description:</b> ISR Payload Sensor Technology supports development, integration, and testing of sensor miniaturization efforts to adapt large unmanned system ISR capabilities on all SOF unmanned ISR platforms.		1.896	1.908
<b>FY 2021 Plans:</b>			-

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
Continue spiral development to increase the smaller SOF ISR platforms' capabilities through incremental development, integration, and testing.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$1.908 million was made available to support emerging critical Command requirements.			
<b>Title:</b> Aviation Engineering Analysis (AEA)		-	3.947
<b>Description:</b> Funding supports engineering analysis activities to address aviation survivability such as signature management, situational awareness, and versatile mission equipment (payloads, communications and weapons) to achieve SOF mission objectives.			2.886
<b>FY 2021 Plans:</b> Perform engineering analysis to improve SOF aviation mission survivability. Activities include, but are not limited to, signature management (acoustic, infrared, radio frequency), situational awareness with full spectrum threat warning and countermeasures, and versatile mission equipment (payloads, communications and weapons) to improve SOF survivability in less than permissive operating environments.			
<b>FY 2022 Plans:</b> Continues to perform engineering analysis and perform demonstrations to improve aviation mission survivability, mission automation, sensor fusion, targeting enhancement, cyber hardening, navigation in denied environments, and datalink enhancements to support Fixed Wing next gen ISR, next gen Mobility and next gen Strike platforms. Activities include, but are not limited to, signature management (Acoustic, infrared, radio frequency), situational awareness with full spectrum threat warning and countermeasures, and versatile mission equipment (payloads, communications and weapons) to improve SOF survivability in less than permissive operating environments. Other technology advancements for Fixed Wing platforms include improvements for increased range, speed with reduced time to target, improving ability to insert and recover forces in contested environments and technology analysis on advanced mobility platforms (deep penetrating and aquatic landing). Strike enhancements include targeting/engagement automation, weapons effects and stand-off capability.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$1.061 million was made available to support emerging critical Command requirements.			
<b>Title:</b> Avionics Modifications (AVNCS)		0.250	-
<b>Description:</b> Funding supports software development and integration for the MC/EC-130J Global Positioning System (GPS) hardening effort.			-
<b>Accomplishments/Planned Programs Subtotals</b>		144.192	102.280
			38.594



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	<b>FY 2020</b>	<b>FY 2021</b>
<b>Congressional Add:</b> Classified Project	8.000	-
<b>FY 2020 Accomplishments:</b> Details provided under Separate Cover		
<b>Congressional Adds Subtotals</b>	8.000	-

## C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• PROC/5000C13000: <i>C-130 Modifications</i>	16.461	17.014	13.373	-	13.373	-	-	-	-	-	-
• PROC/2012C130J: AC/MC-130J	143.232	153.914	205.216	-	205.216	-	-	-	-	-	-
• PROC/1202PSP: <i>Precision Strike Package</i>	232.599	233.111	165.224	-	165.224	-	-	-	-	-	-
• PROC0201RWUPGR: <i>Rotary Wing Upgrades and Sustainment</i>	177.483	211.041	202.278	-	202.278	-	-	-	-	-	-

## Remarks

## D. Acquisition Strategy

- EW – RFCM: Awarded \$700 million ceiling acquisition and procurement contract covering Engineering and Manufacturing Development (EMD), Low-Rate Initial Production (L-RIP), and Full-Rate Production (FRP) activities. EMD and LRIP are Fixed Price Award Fee (FPAF) incentivizing schedule and were awarded in 3rd Qtr FY 2020. FRP and other programmatic support activities (such as data rights and system integration laboratory options) are Firm Fixed Price (FFP).
- PSP for SOF: Incremental acquisition strategy to integrate and test the PSP and capability enhancements on donor MC-130J aircraft provided by the U.S. Air Force and other SOF aircraft. Multiple contract awards.
- PSP HEL: AC-130 HEL program utilizes Naval Surface Warfare Center (NSWC) Dahlgren Division as the Government lead system integrator of HEL components. HEL system components are either purchased under Defense Ordnance Technology Consortium OTA or developed and assembled by NSWC Dahlgren. Both approaches provide flexibility for rapid prototyping.
- C-130 SOF Common TF/TA SKR: Awarded delivery order on Cost Plus Incentive Fee (CPIF) contract to integrate and test the SOF Common TF/TA SKR on MC-130J aircraft and develop modifications to aircraft displays and controls.
- MH-47/MH-60 SOF Common TF/TA SKR: Continue software spiral development to improve the reliability and usability of the radar.

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<ul style="list-style-type: none"><li>• <b>ISR Payload Sensor Technology:</b> Effort is being executed via a spiral development, integration and testing acquisition strategy based on leveraging existing sensor technology. The focus will be on reducing the size, weight, power, and cost of state of the art ISR sensors fielded on larger ISR platforms, in order to make them usable by smaller SOF ISR platforms. This development will include the integration of the ISR capability with the platform's Command and Control and Communications systems as appropriate.</li><li>• <b>Aviation Engineering Analysis:</b> Utilize Joint DOD programs to advance the technology levels for both the current Fixed Wing (FW) platforms and the advanced mobility platforms along with the Joint Aircraft Survivability Program sponsored projects to recommend material solutions for demonstration and potential integration on FW aircraft.</li><li>• <b>EC-130J Upgrades:</b> Operational Flight Program (OFP) Block Cycle is being developed by the Air Force program office using existing development and production contracts.</li></ul>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF100 / Aviation Systems Advanced Development					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Electronic Warfare (EW) - Radio Frequency Countermeasures (RFCM) B-Kit Competitive Demonstration	C/FFP	Various : Various	-	10.050	Nov 2019	-		-		-		-	0.000	10.050	-
EW - RFCM Follow-on Development Contract	C/FPAF	Sierra Nevada Corp. : Centennial, CO	-	30.195	May 2020	44.383	Mar 2021	5.361	Nov 2021	-		5.361	Continuing	Continuing	-
EW RFCM Spiral One	C/TBD	Various : Various	-	-		-		6.950	Mar 2022	-		6.950	Continuing	Continuing	-
Precision Strike Package (PSP) for SOF - Defensive Systems	C/Various	Various : Various	9.260	18.641	Jan 2020	3.000	Mar 2021	-		-		-	0.000	30.901	-
PSP for SOF- Alternate Position, Navigation, and Timing	C/Various	Various : Various	8.308	-		0.500	Feb 2021	-		-		-	0.000	8.808	-
PSP for SOF - Adverse Weather	C/Various	Various : Various	3.432	1.000	Mar 2020	-		-		-		-	0.000	4.432	-
PSP for SOF - Deficiency Resolution	C/Various	Various : Various	2.000	4.789	Mar 2020	0.711	Apr 2021	-		-		-	0.000	7.500	-
PSP for SOF- Other Government Costs	C/Various	Various : Various	1.020	-		0.418	Feb 2021	-		-		-	0.000	1.438	-
PSP High Energy Laser (HEL) - High Power Laser	C/CPFF	Lockheed Martin Aculite : Bothell, WA	17.000	4.468	Apr 2020	1.810	Mar 2021	-		-		-	0.000	23.278	-
PSP HEL - Subsystem Assembly	C/CPFF	Naval Surface Warfare Center : Dahlgren, VA	5.658	11.376	Jul 2020	11.473	Apr 2021	-		-		-	Continuing	Continuing	-
PSP HEL - Battery Development	C/CPFF	General Technical Services : Wall, NJ	1.914	1.630	Apr 2020	1.048	Mar 2021	-		-		-	0.000	4.592	-
PSP HEL - Thermal Development	C/CPFF	Naval Surface Warfare Center : Dahlgren, VA	1.800	4.123	Jul 2020	-		-		-		-	0.000	5.923	-

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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PSP HEL - Integration and Ground Testing	C/CPFF	Naval Surface Warfare Center : Dahlgren, VA	-	4.659	Jul 2020	7.564	Apr 2021	10.608	Dec 2021	-		10.608	Continuing	Continuing	-
PSP HEL - Flight Testing/ Demonstration	C/CPFF	Various : Various	-	-		2.300	Apr 2021	1.400	Mar 2022	-		1.400	Continuing	Continuing	-
C-130 SOF Common Terrain Following/Terrain Avoidance (TF/TA) Silent Knight Radar (SKR)	C/CPIF	Lockheed Martin Aero : Marietta, GA	187.881	19.407	Jan 2020	5.847	Jan 2021	-		-		-	0.000	213.135	-
MH-47/MH-60 SOF Common TF/TA SKR	SS/FP	Raytheon : McKinney, TX	11.430	3.733	Apr 2020	1.653	Apr 2021	1.467	Apr 2022	-		1.467	Continuing	Continuing	-
Intelligence, Surveillance, and Reconnaissance (ISR) Payload Development, Test and Integration	Various	Various : Various	5.542	1.896	Nov 2019	1.908	Nov 2020	-		-		-	0.000	9.346	-
Aviation Engineering Analysis (AEA) – Aircraft Survivability Analysis	C/CPFF	Various : Various	24.389	-		1.500	Jan 2021	1.760	Jan 2022	-		1.760	Continuing	Continuing	-
AEA – Joint Aircraft Survivability Program (JASP)	C/CPFF	JASP : Various	-	-		2.447	Jan 2021	1.126	Jan 2022	-		1.126	Continuing	Continuing	
C-130 Avionics Modifications	C/CPFF	Lockheed Martine : SOFSA Lexington, KY	0.500	0.250		-		-		-		-	0.000	0.750	-
Classified Project - Congressional Add	C/Various	Under Separate Cover : Under Separate Cover	-	8.000		-		-		-		-	0.000	8.000	-
Prior Year Funding - Completed Efforts	Various	Various : Various	666.076	-		-		-		-		-	0.000	666.076	-
Subtotal			946.210	124.217		86.562		28.672		-		28.672	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF100 / Aviation Systems Advanced Development					
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EW-RFCM	C/Various	Various : Various	23.934	5.919	Jan 2020	3.400	Jan 2021	1.171	Jan 2022	-		1.171	Continuing	Continuing	-
C-130 SOF Common TF/ TA SKR	C/CPIF	Various : Various	16.089	3.887	Dec 2019	1.185	Dec 2020	-		-		-	0.000	21.161	-
PSP for SOF - Other Government Costs	C/Various	Various : Various	3.663	5.082	Apr 2020	-		-		-		-	0.000	8.745	-
Prior Year Funding - Completed Efforts	Various	Various : Various	38.802	-		-		-		-		-	0.000	38.802	-
Subtotal			82.488	14.888		4.585		1.171		-		1.171	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EW-RFCM	C/Various	Various : Various	8.380	3.081	Dec 2019	5.000	Dec 2020	8.123	Dec 2021	-		8.123	Continuing	Continuing	-
C-130 SOF Common TF/ TA SKR	C/CPIF	Various : Various	35.699	8.071	Dec 2019	5.424	Dec 2020	-		-		-	0.000	49.194	-
MH-47/MH-60 SOF Common TF/TA SKR	SS/FP	Various : Various	125.371	1.935	Jan 2020	0.709	Jan 2021	0.628	Jan 2022	-		0.628	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	39.130	-		-		-		-		-	0.000	39.130	-
Subtotal			208.580	13.087		11.133		8.751		-		8.751	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Funding - Completed Efforts	Various	Various : Various	57.332	-		-		-		-		-	0.000	57.332	-
Subtotal			57.332	-		-		-		-		-	0.000	57.332	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command											Date: May 2021				
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems					Project (Number/Name) SF100 / Aviation Systems Advanced Development					
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			1,294.610	152.192		102.280		38.594		-		38.594	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

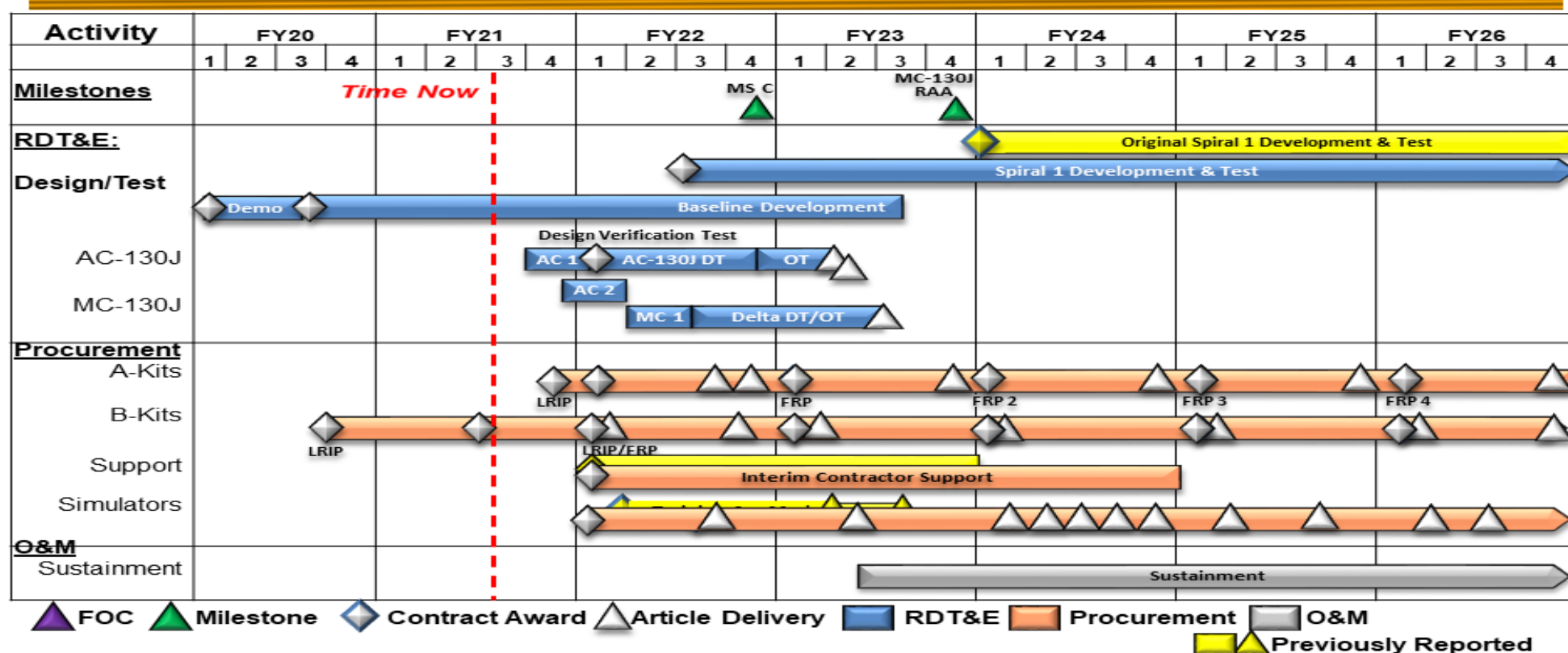
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
SF100 / Aviation Systems Advanced  
Development

# AC/MC-130J Radio Frequency Countermeasures (RFCM) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

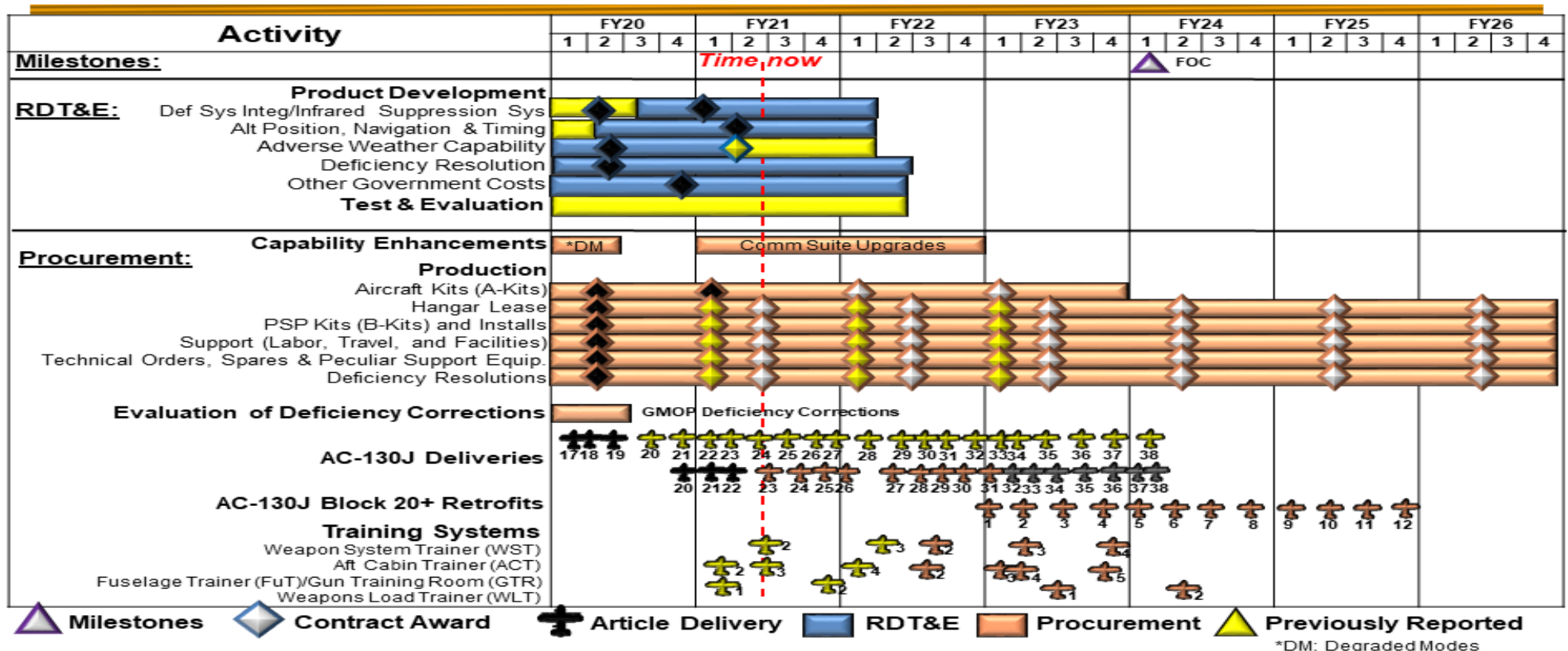
Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
SF100 / Aviation Systems Advanced  
Development

# AC-130J/Precision Strike Package (PSP) Schedule

Note: Procurement contract award milestones updates are administrative and do not depict a schedule slip. Test and Evaluation is included in the remaining RDT&E lines.





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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

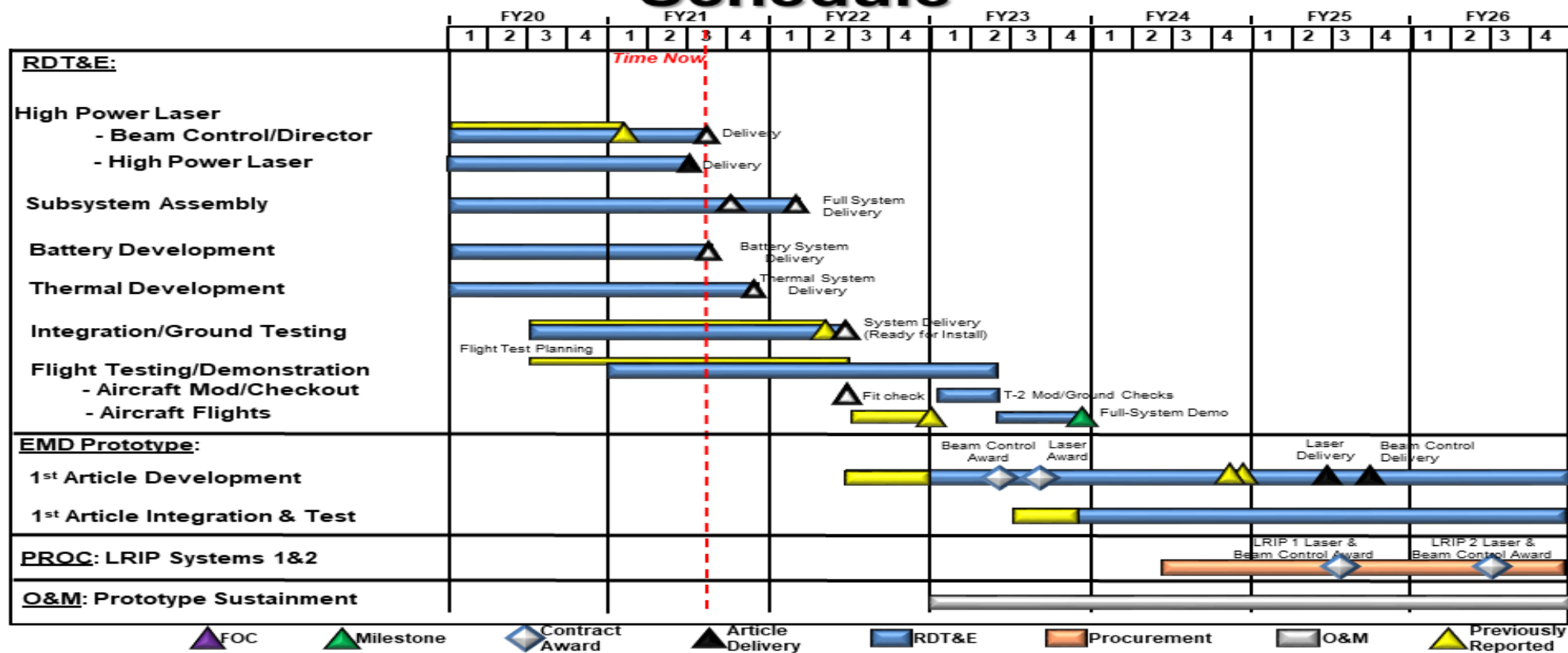
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
SF100 / Aviation Systems Advanced  
Development

# AC-130J High Energy Laser (HEL) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

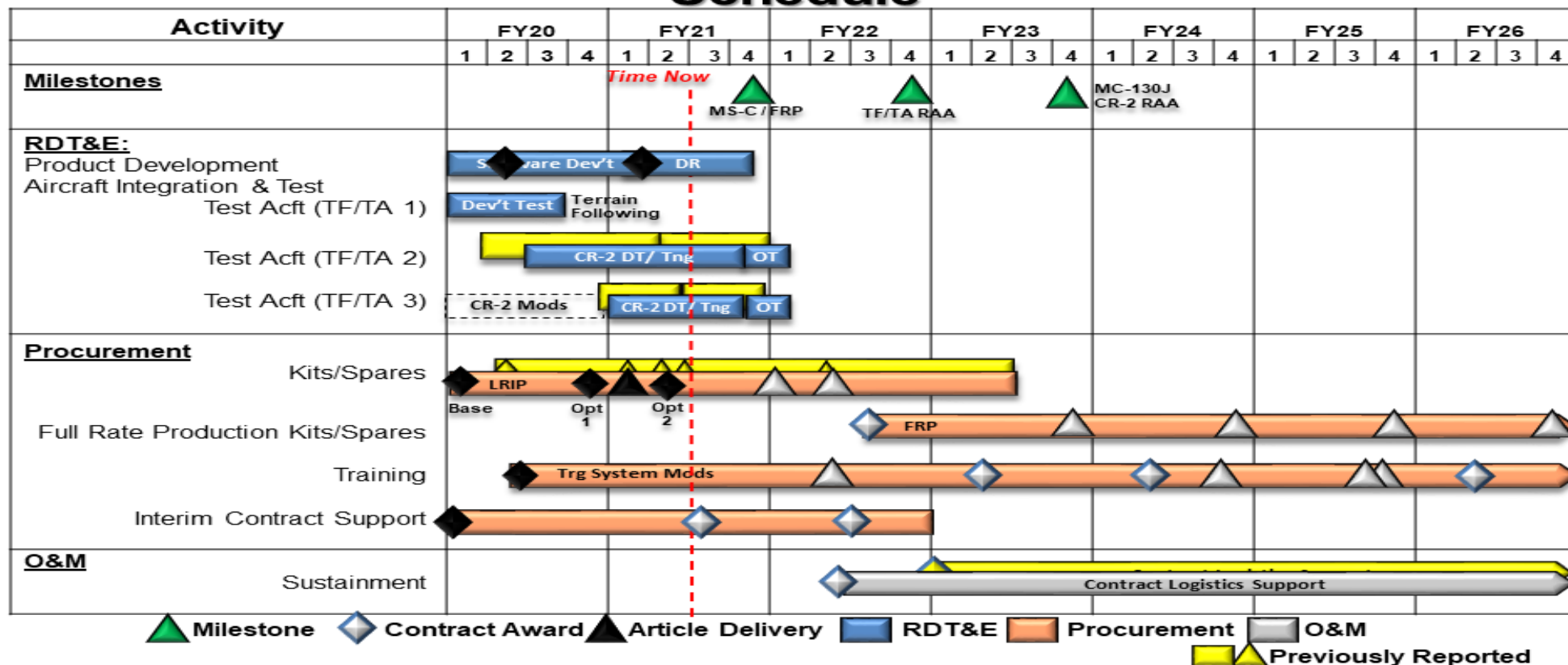
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Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
SF100 / Aviation Systems Advanced  
Development

## C-130 SOF Common Terrain Following/Terrain Avoidance (TF/TA) Silent Knight Radar (SKR) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

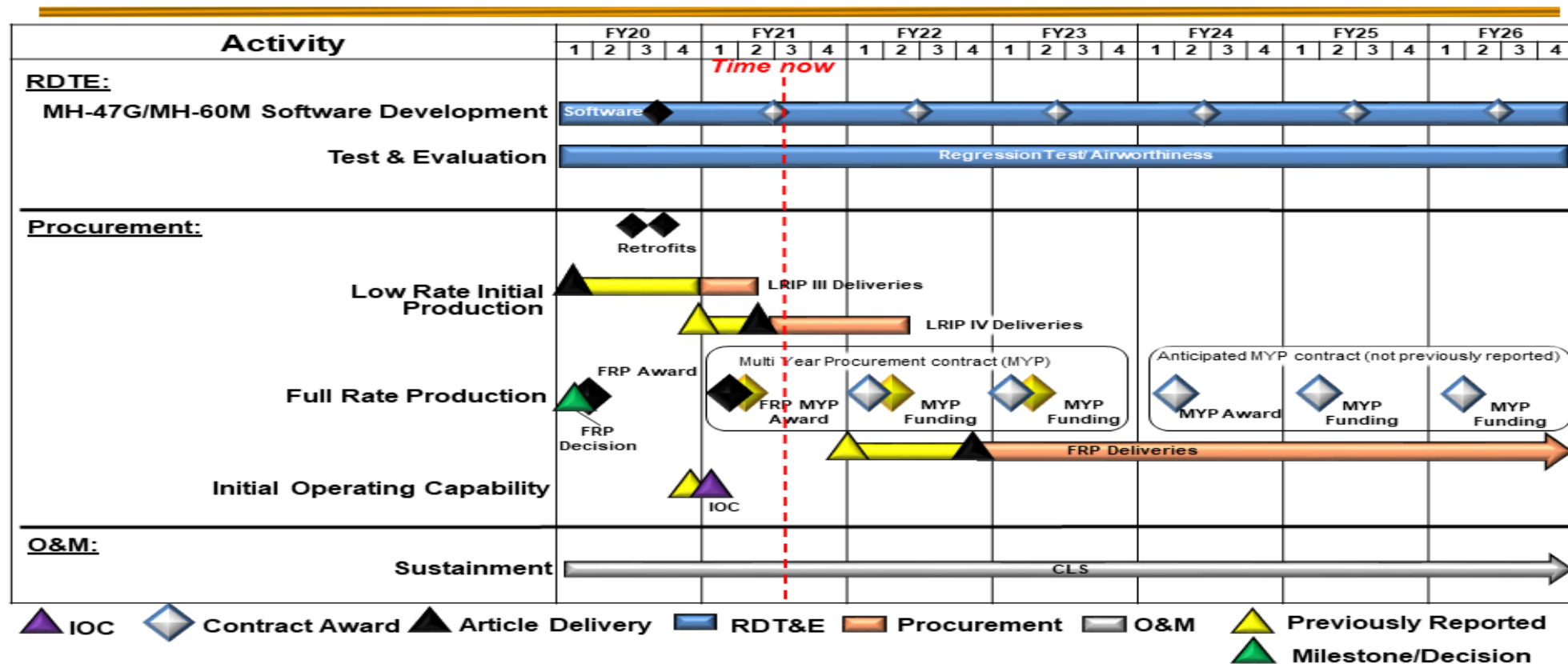
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
SF100 / Aviation Systems Advanced  
Development

# MH-47/MH-60 SOF Common TF/TA SKR Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

Appropriation/Budget Activity

0400 / 7

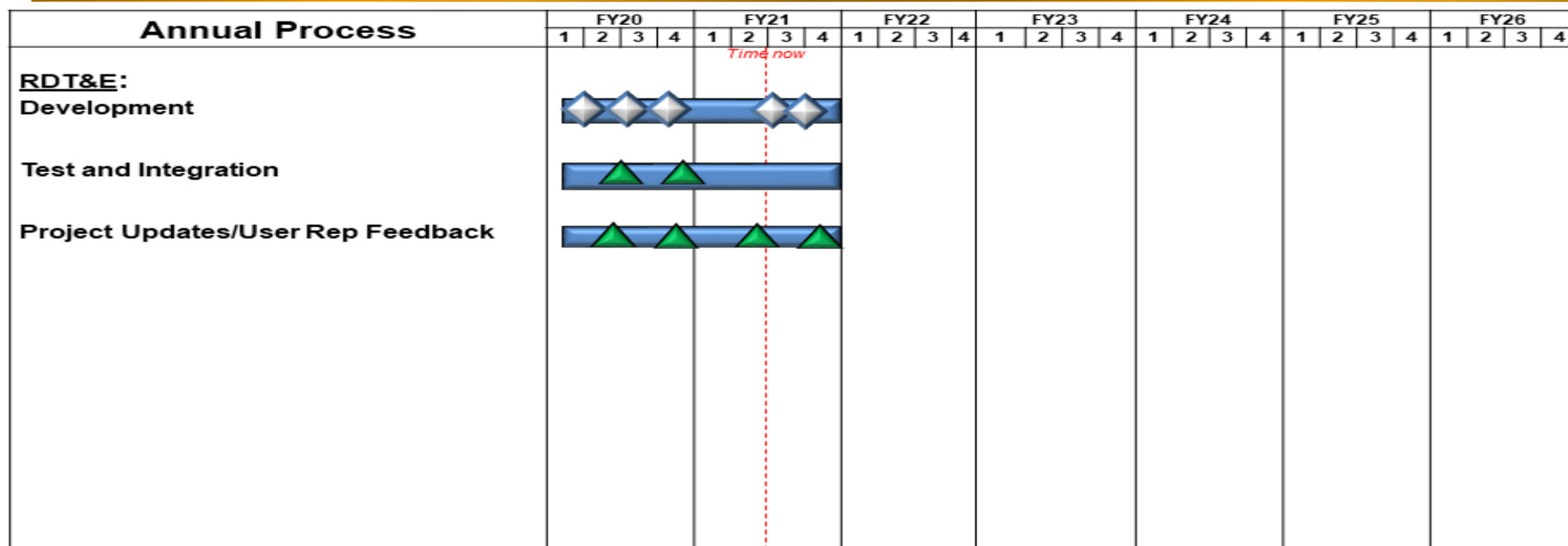
R-1 Program Element (Number/Name)

PE 1160403BB / Aviation Systems

Project (Number/Name)

SF100 / Aviation Systems Advanced Development

## Intelligence, Surveillance, and Reconnaissance (ISR) Payload Schedule



FOC



Milestone



Contract Award



Article Delivery



Previously Reported



RDT&E



Procurement



O&M

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

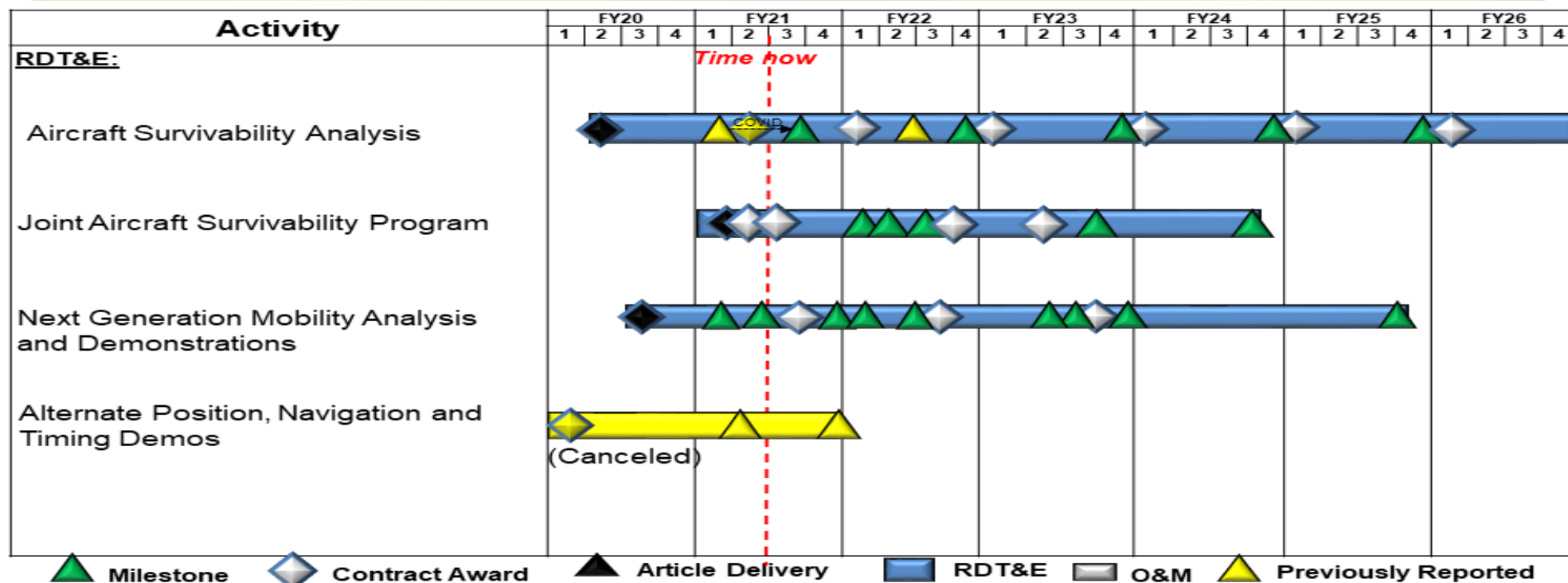
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
SF100 / Aviation Systems Advanced  
Development

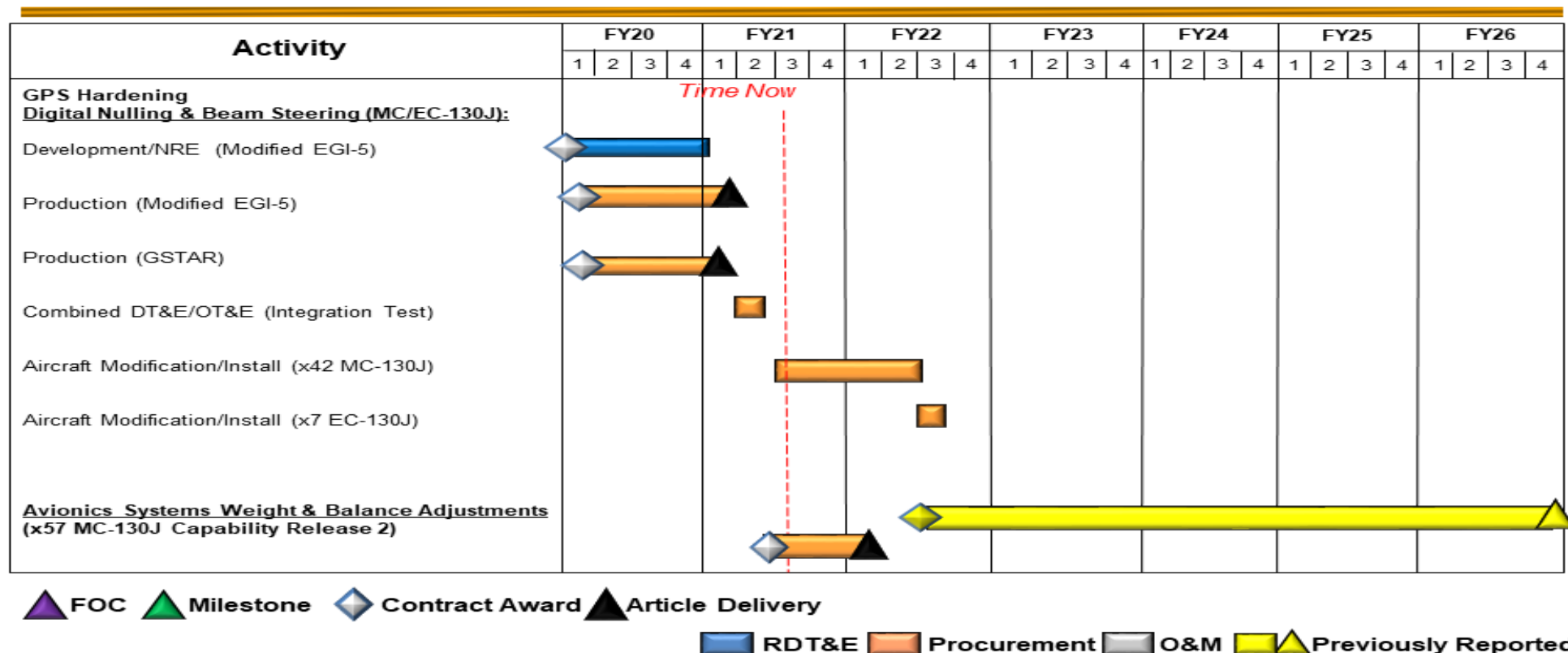
# Aviation Engineering Analysis Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development	

## C-130 Avionics Modifications Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> SF100 / <i>Aviation Systems Advanced Development</i>	

**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Electronic Warfare - Radio Frequency Countermeasures (EW-RFCM)</i></b>				
Product Development, Integration and Test	1	2020	3	2023
Spiral 1 Development	3	2022	4	2026
Developmental Test and Operational Test (DT/OT) AC-130J	3	2021	2	2023
DT/OT #1 MC-130J	1	2022	3	2023
<b><i>Precision Strike Package (PSP) for SOF</i></b>				
Defensive Systems Product Development	3	2020	1	2022
Alternate Position, Navigation and Timing Product Development	2	2020	1	2022
Adverse Weather Product Development	1	2020	1	2021
Deficiency Resolution Product Development	1	2020	2	2022
Other Capability Enhancements Product Development	1	2020	2	2022
<b><i>PSP High Energy Laser (HEL)</i></b>				
PSP HEL 60kW Beam Control/Beam Director	1	2020	3	2021
PSP HEL High Power Laser	1	2020	3	2021
PSP HEL Subsystem Assembly	1	2020	1	2022
PSP HEL Battery Development	1	2020	3	2021
PSP HEL Thermal Development	1	2020	4	2021
PSP HEL Integration and Ground Testing	3	2020	2	2022
PSP HEL Flight Testing/Demonstration	1	2021	4	2023
<b><i>C-130 SOF Common Terrain Following/Terrain Avoidance (TF/TA) Silent Knight Radar (SKR)</i></b>				
Software Development	1	2020	4	2021

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> SF100 / <i>Aviation Systems Advanced Development</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Development/Flight Testing	1	2020	4	2021
Operational Testing	4	2021	1	2022
<b><i>MH-60/MH-47 SOF Common (TF/TA) SKR</i></b>				
MH-47G/MH-60M Product Development & Test (Software Spirals)	1	2020	4	2026
<b><i>Intelligence, Surveillance, and Reconnaissance (ISR) Payload</i></b>				
Development	1	2020	4	2021
Testing and Integration	1	2020	4	2021
Project Update/User Rep Feedback	1	2020	4	2021
<b><i>Aviation Engineering Analysis (AEA)</i></b>				
Aircraft Survivability Analysis	2	2020	4	2026
Joint Aircraft Survivability Program	1	2021	4	2024
Next Generation Mobility Analysis and Demonstrations	2	2020	4	2025
<b><i>C-130 Avionics Modifications</i></b>				
Development/NRE (Modified EGI-5)	1	2020	4	2020



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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF200 / CV-22			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
SF200: CV-22	43.280	23.931	16.773	6.932	-	6.932	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 212												

## A. Mission Description and Budget Item Justification

The CV-22 is a SOF variant of the Joint V-22 vertical medium lift, multi-mission aircraft. The CV-22 project provides long range, high speed, infiltration, exfiltration, and resupply to SOF teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by other existing aircraft. The funding in this project supports integration, design, development, rapid prototyping, and test to provide improved capabilities to include, but not limited to, more robust performance in situational awareness, Intelligence, Surveillance, and Reconnaissance (ISR), weapons, SOF communications, avionics, interoperability, defensive/survivability systems, speed and maneuverability, mission deployment and improved reliability and maintainability of the CV-22 platform.

CV-22 SOF Common Terrain Following/Terrain Avoidance (TF/TA) Silent Knight Radar (SKR): Provides long-range, night/adverse weather, clandestine penetration of medium-to-high threat areas for infiltration, exfiltration, and resupply of SOF forces. This more sustainable and capable radar replaces the obsolescing APQ-186 terrain following/avoidance radar currently integrated on CV-22 aircraft.

CV-22 Block 20 Systems: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, robust performance in situational awareness, ISR, weapons, SOF communications, avionics, interoperability, defensive/survivability systems, speed and maneuverability, mission deployment, improved reliability and maintainability of the CV platform. Included within Block 20 is the Full-azimuth Defensive Weapon System (FDWS). FDWS provides the CV-22 with the capability to suppress threats in the forward hemisphere while the aircraft is in the critical phase of landing and takeoff at the mission objective. The FDWS integrates and improves upon the fielded GAU-17 belly gun system currently employed on the United States Marine Corps (USMC) MV-22 aircraft with the SOF peculiar Color Helmet Mounted Display (CHMD) and cockpit firing controls for pilot operation.

CV-22 Reliability Improvements: Design, integrate, test and validate system, and sub-system, reliability improvement enhancements to meet required aircraft availability and operational requirements. This incremental development will accelerate the fielding and retrofit of system design improvements directly increasing CV-22 fleet readiness and aircraft availability.

## B. Accomplishments/Planned Programs (\$ in Millions)

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> CV-22 SOF Common TF/TA SKR	23.437	14.644	4.851
<b>Description:</b> Provides long-range, night/adverse weather, clandestine penetration of medium-to-high threat areas for infiltration, exfiltration, and resupply of SOF forces. This more sustainable and capable radar replaces the obsolescing AN/APQ-174/186 Multi-Mode Radar (MMR) currently integrated on CV-22 aircraft. This effort includes development of the CV-22 SOF Common			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7		<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>		<b>Project (Number/Name)</b> SF200 / CV-22	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
TF/TA SKR Operational Flight Program (OFP) software, and development of CV-22 platform software and hardware to support integration and test.					
<b>FY 2021 Plans:</b> Continue integration/testing of CV-22 SOF Common TF/TA SKR OFP software development and continue integration/testing of the CV-22 SOF Common TF/TA SKR. Complete core software development build.					
<b>FY 2022 Plans:</b> Continues integration/testing of CV-22 SOF Common TF/TA SKR OFP software development and continues integration/testing of the CV-22 SOF Common TF/TA SKR.					
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$9.793 million is due to transition into final phases of integration/testing of the CV-22 SOF Common TF/TA SKR OFP software development and integration. The core software development build is expected to complete in FY21, with FY22 efforts continuing the system evaluation and subsequent resolution of deficiencies discovered during developmental testing.					
<b>Title:</b> CV-22 Block 20 Systems			0.494	2.129	-
<b>Description:</b> Improves situational awareness, ISR, weapons, SOF communications, avionics, interoperability, survivability, speed and maneuverability, mission deployment, reliability, and maintainability of the CV-22 platform. Included within Block 20 is the FDWS. FDWS provides the CV-22 with the capability to suppress threats in the forward hemisphere while the aircraft is in the critical phase of landing and takeoff at the mission objective. The FDWS integrates the fielded GAU-17 belly gun system currently employed on the USMC MV-22 aircraft with the SOF peculiar Color Helmet Mounted Display and cockpit firing controls for pilot operation.					
<b>FY 2021 Plans:</b> Contract closeout of current preliminary engineering design of Block 20 FDWS onto CV-22. Previous efforts leading up to FY20 were MFP-4 funded.					
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$2.129 million was due to contract closeout of current preliminary engineering design of Block 20 FDWS.					
<b>Title:</b> CV-22 Reliability Improvements			-	-	2.081
<b>Description:</b> Improves platform reliability and maintainability to meet fleet aircraft availability requirements. Efforts include design and re-design enhancements, and acceleration of field integration.					
<b>FY 2022 Plans:</b>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command										<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 7				<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>				<b>Project (Number/Name)</b> SF200 / CV-22			

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>										<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Begins Non-Recurring Engineering (NRE) required to accelerate improved Block 3 Engine Turbine upgrades.												
<b><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i></b> Increase of \$2.081 million is due to command priority of CV-22 reliability improvement initiative.												
<b>Accomplishments/Planned Programs Subtotals</b>										23.931	16.773	6.932

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PROC/1000CV22: CV-22 SOF Modification	17.256	54.109	41.762	-	41.762	-	-	-	-	-	-
• RDT&E1/0401318F: RDT&E, USAF	16.606	14.873	15.183	-	15.183	-	-	-	-	-	-
• RDT&E/0604262N: V-22 RDT&E, N BA-05	184.705	133.425	110.559	-	110.559	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

When possible, rapid prototyping will be incorporated in the acquisition strategies below to develop, demonstrate, and evaluate residual operational capabilities. The SKR was developed by USSOCOM to provide a SOF Common TF/TA capability for SOF aircraft. The SKR replaces the obsolescing APQ-186 TF/TA multimode radar on the CV-22. The acquisition strategy for the CV-22 SOF Common TF/TA SKR program is to procure radar units and radar software modifications through the USSOCOM SKR program management office, buy aircraft modification kits, and integrate SKR into CV-22 aircraft using a mixture of both sole source and competitive contracts.

The Block 20 FDWS will be based on modifications to the legacy Defensive Weapon System (DWS) currently fielded on USMC MV-22 aircraft and previously ground tested on a CV-22. These modifications will integrate the DWS with the CV-22 pilots Color Helmet Mounted Displays and cockpit controls to correct deficiencies/improve system effectiveness. They will be awarded on a competitive Engineering & Manufacturing Development contract for development.

The CV-22 Reliability Improvement projects will consist of a mix of competitive and sole-source awards.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF200 / CV-22					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CV-22 SOF Common Terrain Following/Terrain Avoidance (TF/TA) Silent Knight Radar (SKR) - Operational Flight Program (OFP) Development	C/CPFF	Various : Various	19.402	13.593	Nov 2019	7.720	Nov 2020	2.571	Dec 2021	-		2.571	Continuing	Continuing	-
CV-22 SOF Common TF/TA SKR- Integration	C/CPFF	Various : Various	18.208	7.734	Feb 2020	3.982	Nov 2020	1.310	Dec 2021	-		1.310	Continuing	Continuing	-
CV-22 Block 20 Systems	Various	Various : Various	1.057	0.494	Feb 2020	2.129	Nov 2020	-		-		-	0.000	3.680	-
CV-22 Reliability Improvements	C/Various	Various : Various	-	-		-		1.081	Dec 2021	-		1.081	Continuing	Continuing	-
Subtotal			38.667	21.821		13.831		4.962		-		4.962	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CV-22 SOF Common TF/TA SKR - OFP	C/CPFF	Various : Various	1.645	0.937	Nov 2019	2.412	Nov 2020	0.776	Dec 2021	-		0.776	Continuing	Continuing	-
CV-22 SOF Common TF/TA SKR- Integration	C/CPFF	Various : Various	1.032	1.173	Feb 2020	0.530	Nov 2020	0.194	Dec 2021	-		0.194	Continuing	Continuing	-
CV-22 Reliability Improvements Test and Evaluation	C/Various	Various : Various	-	-		-		1.000	Dec 2021	-		1.000	Continuing	Continuing	-
Prior Year	Various	Various : Various	1.936	-		-		-		-		-	0.000	1.936	-
Subtotal			4.613	2.110		2.942		1.970		-		1.970	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			43.280	23.931		16.773		6.932		-		6.932	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

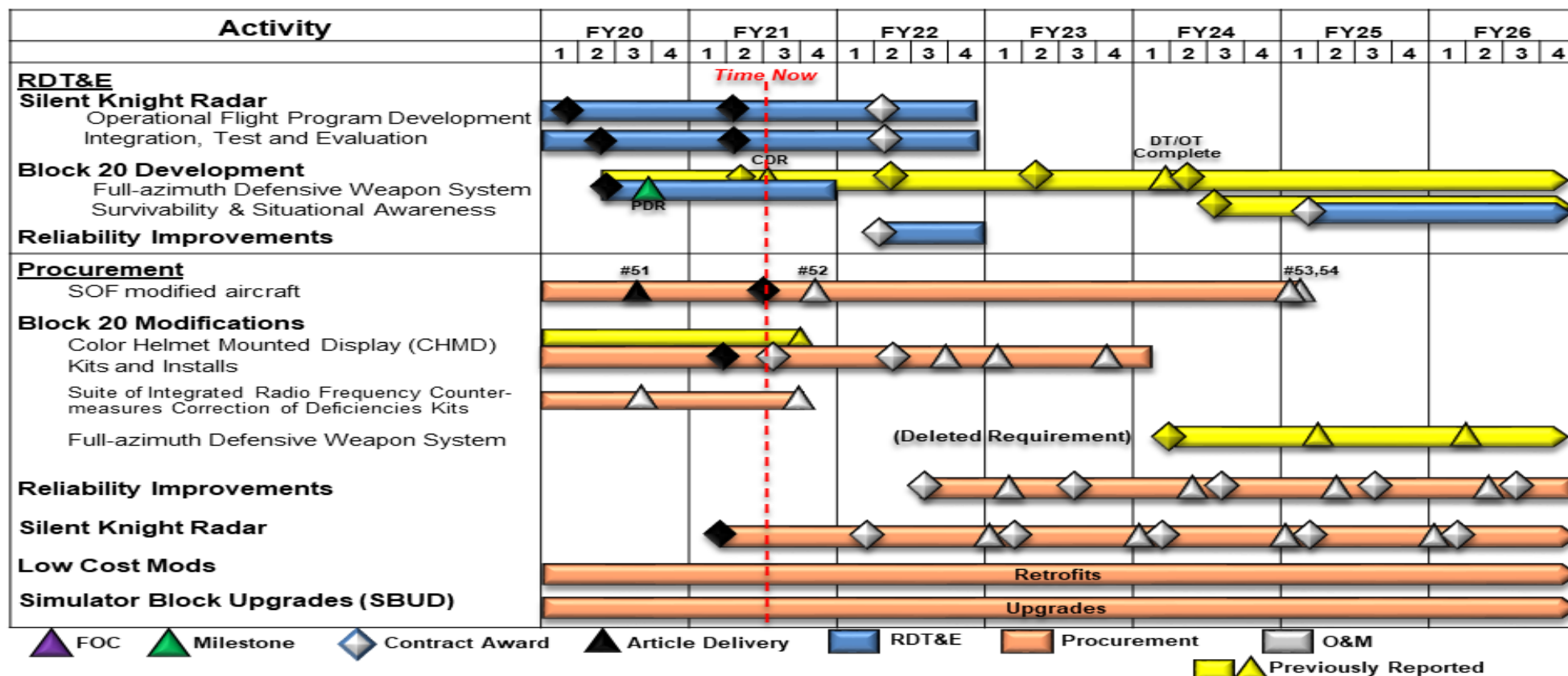
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
SF200 / CV-22

## CV-22 Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> SF200 / CV-22	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>CV-22</b>				
SOF Common TF/TA (Silent Knight) Radar - Operational Flight Program (OFP) Development	1	2020	4	2022
SOF Common TF/TA (Silent Knight) Radar - Radar Integration, Test & Evaluation	1	2020	4	2022
Block 20 Full-azimuth Defensive Weapon System (FDWS) Development/Test	2	2020	4	2021
Block 20 Survivability & Situational Awareness	1	2025	4	2026
Reliability Improvements Test and Evaluation	2	2022	4	2022

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command										<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / Aviation Systems				<b>Project (Number/Name)</b> SF300 / Armed Overwatch/Targeting			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
SF300: Armed Overwatch/Targeting	0.000	0.000	25.000	22.952	-	22.952	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Armed Overwatch provides Special Operations Forces (SOF) with deployable, affordable, and sustainable aircraft systems capable of executing Close Air Support (CAS), Precision Strike, and Armed Intelligence, Surveillance & Reconnaissance (Armed ISR) requirements in austere and permissive environments for use in Irregular Warfare operations in support of the National Security Strategic Guidance. The funding in this project supports integration and testing of SOF-unique capabilities and Aircraft Certification efforts.

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Armed Overwatch/Targeting	-	25.000	22.952
<p><b>Description:</b> The funding in this project supports integration and testing of SOF-unique capabilities and Aircraft Certification efforts.</p> <p><b>FY 2021 Plans:</b> Initiate and complete prototype demonstrations.</p> <p><b>FY 2022 Plans:</b> Initiates integration and testing of SOF unique capabilities and aircraft certification efforts.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$2.048 million is due to completion of prototype demonstrations 4Q FY 2021.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	-	25.000	22.952

**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• PROC/0201ARMOWT: Armed Overwatch/Targeting	-	21.000	170.000	-	170.000	-	-	-	-	-	-

**Remarks**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> SF300 / <i>Armed Overwatch/Targeting</i>
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**D. Acquisition Strategy**

Armed Overwatch/Targeting: These technologies will be pursued via rapid prototyping and/or rapid fielding, when appropriate, to industry partners for flight demonstrations in FY 2021. The demonstrations results will be used to determine whether a solicitation for a follow-on production contract is in the best interest of the Government.



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF300 / Armed Overwatch/Targeting					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Armed Overwatch/ Targeting: Prototype Testing/Demonstration	C/FFP	Various : Various	-	-		25.000	May 2021	-		-		-	0.000	25.000	-
Armed Overwatch/ Targeting: Aircraft Certification and SOF Unique Integration	C/FFP	Various : Various	-	-		-		22.952	Apr 2022	-		22.952	Continuing	Continuing	-
Subtotal			-	-		25.000		22.952		-		22.952	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		25.000		22.952		-		22.952	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

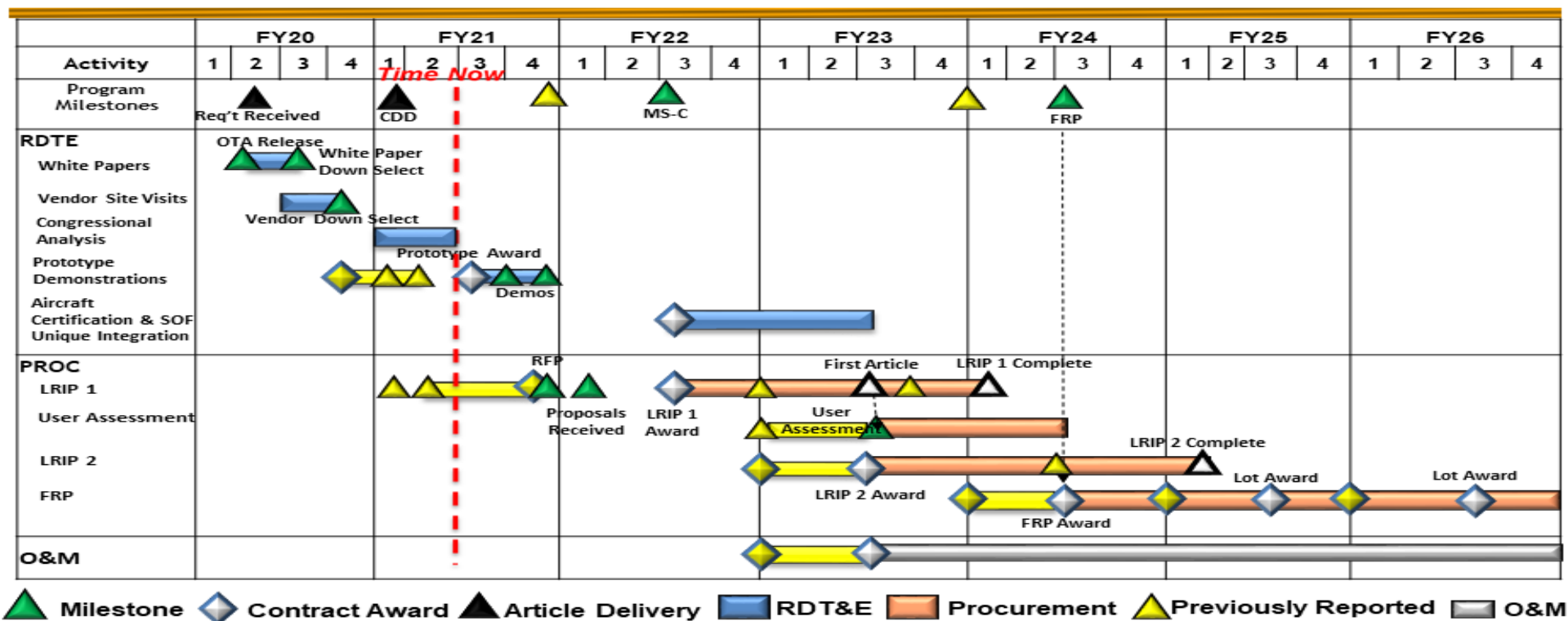
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
SF300 / Armed Overwatch/Targeting

# Armed Overwatch Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> SF300 / <i>Armed Overwatch/Targeting</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Armed Overwatch/Targeting</i></b>				
Prototype Testing/Demonstration	3	2021	4	2021
Aircraft Certification and SOF Unique Integration	3	2022	3	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) S750 / Mission Training and Preparation Systems			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S750: Mission Training and Preparation Systems	43.159	8.289	9.623	10.227	-	10.227	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project funds the definition, design, development, prototyping, integration, and testing of Mission Training and Preparation Systems (MTPS) to support training, avoid obsolescence, and maintain simulator concurrency with weapon system configurations; support mission planning and rehearsal systems enhancements required to meet Special Operations Forces (SOF)-unique mission requirements and correct deficiencies identified in previous testing; and support mission planning and rehearsal capabilities in current MTPS. The MTPS project also includes program management, systems engineering, configuration management, architecture development, risk reduction, and trade study initiatives, as well as initiatives to assure interoperability and commonality between diverse SOF training systems.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2020	FY 2021	FY 2022	
Title: Special Operations Mission Planning and Execution (SOMPE)									8.289	9.623	10.227	
Description: SOMPE develops, integrates, tests, and validates software enhancements required to meet SOF-unique requirements for, and correct deficiencies to, mission planning, preview, and execution software tools to support all phases of SOF operations from deliberate to time-critical. The SOMPE project automates time-sensitive planning activities and provides enhanced situational awareness during mission execution. SOMPE provides the interoperable environment for SOF adaptive planning to integrate global operations including, but not limited to, precision strike software, digital navigation, and Unmanned Aerial Systems (UAS) command and control. This project also provides the integration of SOMPE with multi-dimensional visualization systems, providing immersive mission rehearsal in minimal timeframes from the SOMPE mission plan. SOMPE is embedded in the United States Special Operations Command (USSOCOM) Headquarters, Theater Special Operations Commands (TSOC), Joint Special Operations Task Forces, Joint Special Operations Aviation Components, SOF warfighters, and SOF warfighter platforms.												
FY 2021 Plans: Continue development of software applications to address increased SOF-unique aviation, ground and maritime mission planning requirements; data transfer software from mission planning systems to SOF helicopters, airplanes, and simulator/rehearsal systems; and automated performance models and performance prediction software. Continue updates to mission planning, data transfer, and performance software. Continue development of software applications for smaller mobile computer devices (tablets, smart phones, etc.)												
FY 2022 Plans:												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> S750 / <i>Mission Training and Preparation Systems</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
<p>Continues development of software applications to address increased SOF-unique aviation, ground and maritime mission planning requirements; data transfer software from mission planning systems to SOF helicopters, airplanes, and simulator rehearsal systems; and automated performance models and performance prediction software. Continues updates to mission planning, data transfer, and performance software. Continues development of software applications for smaller mobile computer devices (tablets, smart phones, etc.)</p> <p><b><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i></b>            Increase of \$0.604 million is due to integration of XPlan core and tactical applications capabilities into the TAK product line for efficiency, common interface, common training and increased interoperability with DoD and other government agencies.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>		8.289	9.623
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
<p>The SOMPE program is transitioning to the software acquisition pathway. SOMPE comprises multiple mission planning software development contracts awarded to developers for each project effort. Acquisition strategies depend on the type of development effort. For minor software development projects, contracts may be awarded as sole source acquisitions from existing contract vehicles. For major software development projects, contracts may be awarded as limited or full and open competition acquisitions. Individual acquisition strategies are developed as the scope of software development projects are identified and defined.</p>			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) S750 / Mission Training and Preparation Systems					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Special Operations Mission Planning and Execution (SOMPE) Software Development and Integration	MIPR	Various : Various	34.722	6.797	Jan 2020	7.712	Jan 2021	8.204	Jan 2022	-		8.204	Continuing	Continuing	-
Subtotal			34.722	6.797		7.712		8.204		-		8.204	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOMPE Software	MIPR	Special Operations Mission Planning Office : Fort Eustis, VA	2.697	0.414	Feb 2020	0.375	Feb 2021	0.386	Feb 2022	-		0.386	Continuing	Continuing	-
Subtotal			2.697	0.414		0.375		0.386		-		0.386	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOMPE Software	C/CPFF	Cruz Associates : Shalimar, FL	5.740	1.078	Jan 2020	1.536	Jan 2021	1.637	Jan 2022	-		1.637	Continuing	Continuing	-
Subtotal			5.740	1.078		1.536		1.637		-		1.637	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			43.159	8.289		9.623		10.227		-		10.227	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

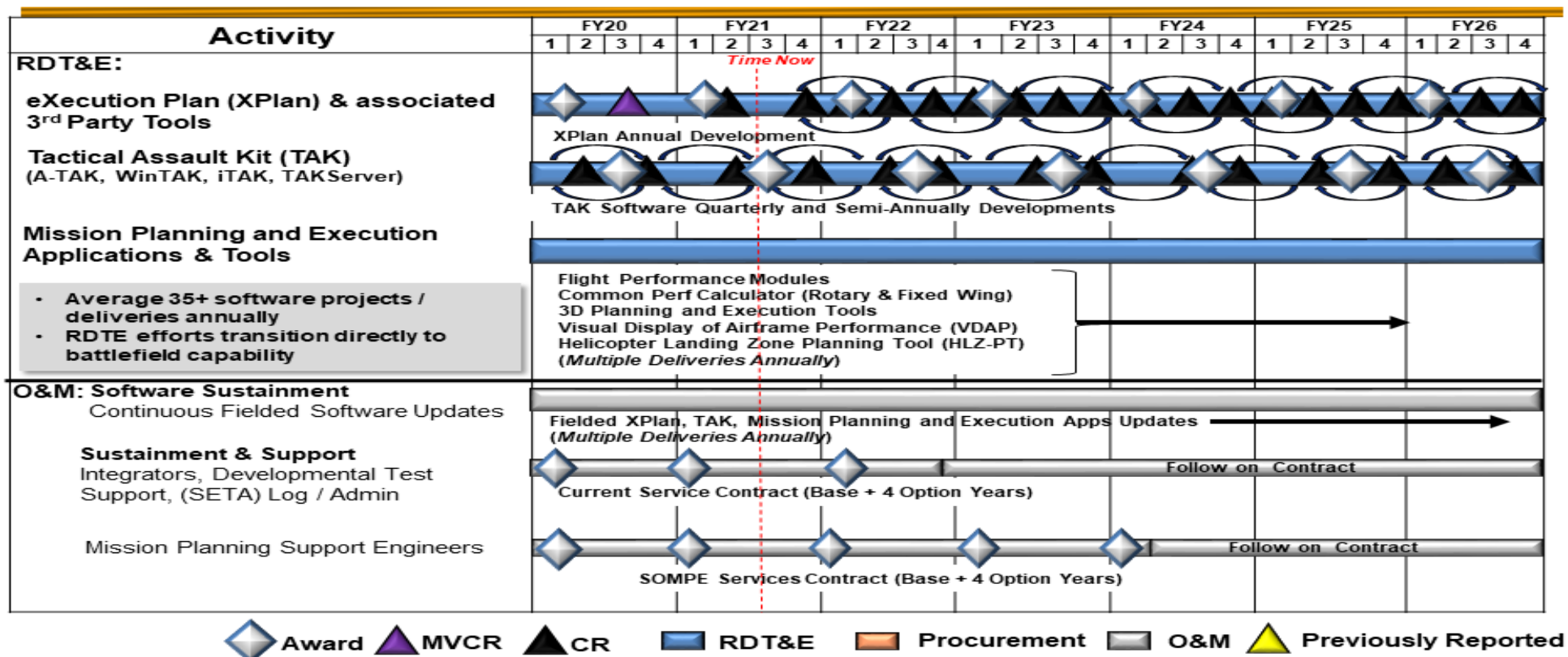
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
S750 / Mission Training and Preparation Systems

# Special Operations Mission Planning and Execution (SOMPE) Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> S750 / <i>Mission Training and Preparation Systems</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Special Operations Mission Planning and Execution (SOMPE)</i></b>				
eXecution Plan (XPlan) & Associated 3rd Part Tools	1	2020	4	2026
Tactical Assault Kit (TAK)	1	2020	4	2026
Mission Planning and Execution Applications & Tools	1	2020	4	2026



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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) S875 / AC/MC-130J			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S875: AC/MC-130J	68.228	28.094	55.083	52.045	-	52.045	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The AC/MC-130J project funds core Special Operations Forces (SOF)-unique modifications to replace aging/retired AC-130H Spectre, AC-130W Stinger II, AC-130U Spooky, MC-130E Combat Talon I, MC-130P Combat Shadow, MC-130H Combat Talon II aircraft. The 8 AC-130H Spectre, 12 AC-130W Stinger II and 17 AC-130U Spooky airframes will be replaced with MC-130J aircraft modified with the Precision Strike Package (PSP) to achieve the AC-130J configuration. The AC-130J aircraft will provide close air support, air interdiction, and armed reconnaissance capability. The 14 MC-130E Talon I, 23 MC-130P Combat Shadow, and 24 MC-130H Talon II airframes will be replaced by MC-130J Commando II aircraft with SOF mission modifications. The MC-130J Commando II aircraft with SOF mission modifications provide clandestine single or multi-ship low-level aerial refueling for special operations helicopters and CV-22 aircraft; conduct airdrops of leaflets, small special operations teams, resupply bundles, and combat rubber raiding craft. The Air Force procures and fields the basic aircraft, common support equipment, and trainers for United States Special Operations Command (USSOCOM). Incremental upgrade and agile software development approaches will be used to integrate SOF capabilities onto the aircraft and training systems. SOF capabilities include, but are not limited to: Airborne Mission Networking (AbMN), data fusion, threat detection and avoidance, integrated Terrain Following/Terrain Avoidance (TF/TA), electronic warfare, and embedded training. Integrating and automating SOF mission systems that deliver these capabilities is critical to fielding SOF-capable AC/MC-130J aircraft to recapitalize Air Force Special Operations Command's legacy C-130 fleet.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> MC-130J Airborne Mission Networking (AbMN)	2.592	2.688	-
<b>Description:</b> AbMN provides aircrew and mission personnel aboard MC-130J aircraft with the ability to send and receive mission-critical data to/from tactical and operational nodes in the battlespace. Capabilities include, but are not limited to, secure Line-of-Sight (LOS)/Beyond Line-of-Sight (BLOS) voice/data communications, friendly force identification, mission tracking, threat identification, full-motion video, collaboration, chat, e-mail, integrated tactical map and data links. AbMN enables SOF to streamline command and control, improve situational awareness, and reduce operational risk through real time exchange of digital information among aircraft, SOF components, and other tactical and operational nodes.			
<b>FY 2021 Plans:</b> Complete developmental, operational, and interoperability testing on the MC-130J along with the SOF Common TF/TA radar, special missions systems, and electronic warfare systems.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$2.688 million is due to the completion of developmental, operational and interoperability testing on the MC-130J in FY 2021.			
<b>Title:</b> Integrated Tactical Mission Systems (ITMS)	25.502	52.395	52.045

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) S875 / AC/MC-130J		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2020	FY 2021	FY 2022
<p><b>Description:</b> The ITMS program increases operational crew performance and aircraft survivability by integrating the MC-130J green aircraft and multiple SOF mission systems as an interoperable system-of-systems. Automated software capabilities will be developed, integrated, and tested with SOF-peculiar and green aircraft flight information, displays, and controls through the Special Mission Systems (SMS) suite. By increasing system-of-systems data interoperability through an Open Mission Systems (OMS) compliant Modular Open System Architecture (MOSA), an agile software development infrastructure will be employed to integrate multiple subsystems and continuously deliver automated software capabilities. Capabilities include, but are not limited to; automated route replanning, tactical flight management, integrated aircraft defensive systems, defensive countermeasures, and embedded training. The NextGen Special Mission Processor (SMP) resolves current diminishing manufacturing sources issues with a MOSA compliant design to perform central processing for ITMS software. ITMS enables dynamic operations with integrated real-time information, automation, and decision making data for safe TF/TA flight and mission execution (MC-130J aircraft) and seamless employment of the PSP (AC-130J aircraft).</p> <p><b>FY 2021 Plans:</b> Continue capability prototype and demonstration, infrastructure development, system-of-systems integration, tactical map enhancements, TF/TA integration, and increased situational awareness capabilities. Continue OMS development for data and communications interoperability. Continue development of SMS capabilities required for ITMS to include, but not limited to; data fusion, threat correlation, and applications of machine learning and artificial intelligence. Continue Tactical Flight Management System (TFMS), Defensive Countermeasures Suite (DCM), auto route replanner development integration and test on the MC-130J. Begin capability replication, performance, and test on the AC-130J.</p> <p><b>FY 2022 Plans:</b> Continues to identify, prototype, and demonstrate modern OMS capabilities of: Pre-mission software, common roll-on roll-off payload interfaces, enhanced cybersecurity management software, and AC-130J weapons management and planning system interface definition. Continues capability maturation of production and fielded software services through Security Development Operations (SecDevOps). Develops, deploys, and matures cloud-hosted distributed software integration and test environment as part of the agile software framework. Continues development of common interfaces and integrates legacy and on-going mission systems into an inter-operable system architecture. Continues TFMS, Automated Route Replanner, and DCM AC/MC-130J capability development and integration. Continues capability replication, performance, and test on the AC-130J to incorporate PSP. Completes NextGen SMP development, qualification testing, technical data updates, and perform correction of deficiencies. Completes Tactical Map development.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.350 million is due to new and continuing ITMS development, integration and test efforts.</p>					
Accomplishments/Planned Programs Subtotals			28.094	55.083	52.045

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**Exhibit R-2A, RDT&E Project Justification:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> S875 / <i>AC/MC-130J</i>
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## C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/2012C130J: <i>AC/MC-130J</i>	143.232	153.914	205.216	-	205.216	-	-	-	-	-	-
• PROC/1202PSP: <i>Precision Strike Package</i>	232.599	233.111	165.224	-	165.224	-	-	-	-	-	-

## Remarks

### D. Acquisition Strategy

As a core strategy, rapid prototyping has been incorporated in the acquisition strategies below to develop, demonstrate and evaluate residual operational capabilities.

MC-130J AbMN: Award sole source Cost-Plus-Fixed-Fee contract to develop a battlespace information exchange system for the MC-130J consisting of Government/Commercial-off-the-shelf communications and computing hardware and Government/developmental software. This approach leverages portions of the AC-130J gunship infrastructure design applicable to the MC-130J. After completing developmental and operational flight testing, award a sole source contract for Low Rate Initial Production (LRIP) followed by a competitive Firm-Fixed Price (FFP) contract for production, aircraft integration, and fielding.

ITMS: Develop virtual environment to enable collaborative integration of modular software services procured through competitive, sole source contracts, and use of open mission system compliant standards for hardware and software architecture, software, services, and future subsystems.

The U.S. Air Force procures the basic AC-130J aircraft under the HC/MC-130J Recapitalization procurement program. USSOCOM will fund development, integration, and testing of capability enhancements for SOF-unique mission equipment using an incremental acquisition strategy. Multiple contract awards.

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**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / Aviation Systems	<b>Project (Number/Name)</b> S875 / AC/MC-130J
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MC-130J Airborne Mission Networking (AbMN)	C/CPFF	Sierra Nevada Corporation : Centennial, CO	20.363	1.659	Dec 2019	1.264	Dec 2020	-		-		-	0.000	23.286	-
Integrated Tactical Mission System (ITMS) - AC/MC-130J Systems Interoperability & Tactical Map Enhancements	C/Various	Sierra Nevada Corporation : Nevada	38.877	6.157	Nov 2019	5.436	Dec 2020	5.374	Dec 2021	-		5.374	Continuing	Continuing	-
ITMS - MC-130J Software Capability Development	C/CPFF	Lockheed Martin Aeronautics : Marietta	1.500	4.252	Apr 2020	10.870	Feb 2021	11.150	Nov 2021	-		11.150	Continuing	Continuing	-
ITMS - Open Mission System (OMS) Capabilities	C/Various	Various : Various	1.511	4.732	Nov 2019	3.624	Nov 2020	3.762	Dec 2021	-		3.762	Continuing	Continuing	-
ITMS - AC-130J Software Capability Development	C/Various	Various : Various	-	-		9.670	May 2021	8.353	Mar 2022	-		8.353	Continuing	Continuing	-
ITMS - Agile Software Framework Dev & Test	C/Various	Various : Various	-	-		7.034	Jan 2021	6.986	Mar 2022	-		6.986	Continuing	Continuing	-
ITMS - NextGen Special Mission Processor (SMP) Development, Integration & Test	C/Various	Various : Various	3.800	4.419	Nov 2019	1.200	Dec 2020	1.075	Dec 2021	-		1.075	Continuing	Continuing	-
<b>Subtotal</b>			66.051	21.219		39.098		36.700		-		36.700	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Tactical Mission System (ITMS) - Support	C/Various	Various : Various	-	2.249	Apr 2020	2.718	Mar 2021	3.494	Mar 2022	-		3.494	Continuing	Continuing	-
<b>Subtotal</b>			-	2.249		2.718		3.494		-		3.494	Continuing	Continuing	N/A

**UNCLASSIFIED**

**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / Aviation Systems	<b>Project (Number/Name)</b> S875 / AC/MC-130J
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Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MC-130J AbMN Integration & Test	Sub Allot	USSOCOM Detachment 1 Joint Test Interoperability Command : Eglin AFB, FL	1.369	0.933	Dec 2019	1.424	Dec 2020	-		-		-	0.000	3.726	-
ITMS - Test & Integration	Sub Allot	USSOCOM Detachment 1 : Eglin AFB, FL	-	3.693	Dec 2019	11.843	Jan 2021	11.851	Jan 2022	-		11.851	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	C/Various	Lockheed Martin : Atlanta, GA	0.808	-		-		-		-		-	0.000	0.808	-
<b>Subtotal</b>			2.177	4.626		13.267		11.851		-		11.851	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			68.228	28.094		55.083		52.045		-		52.045	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

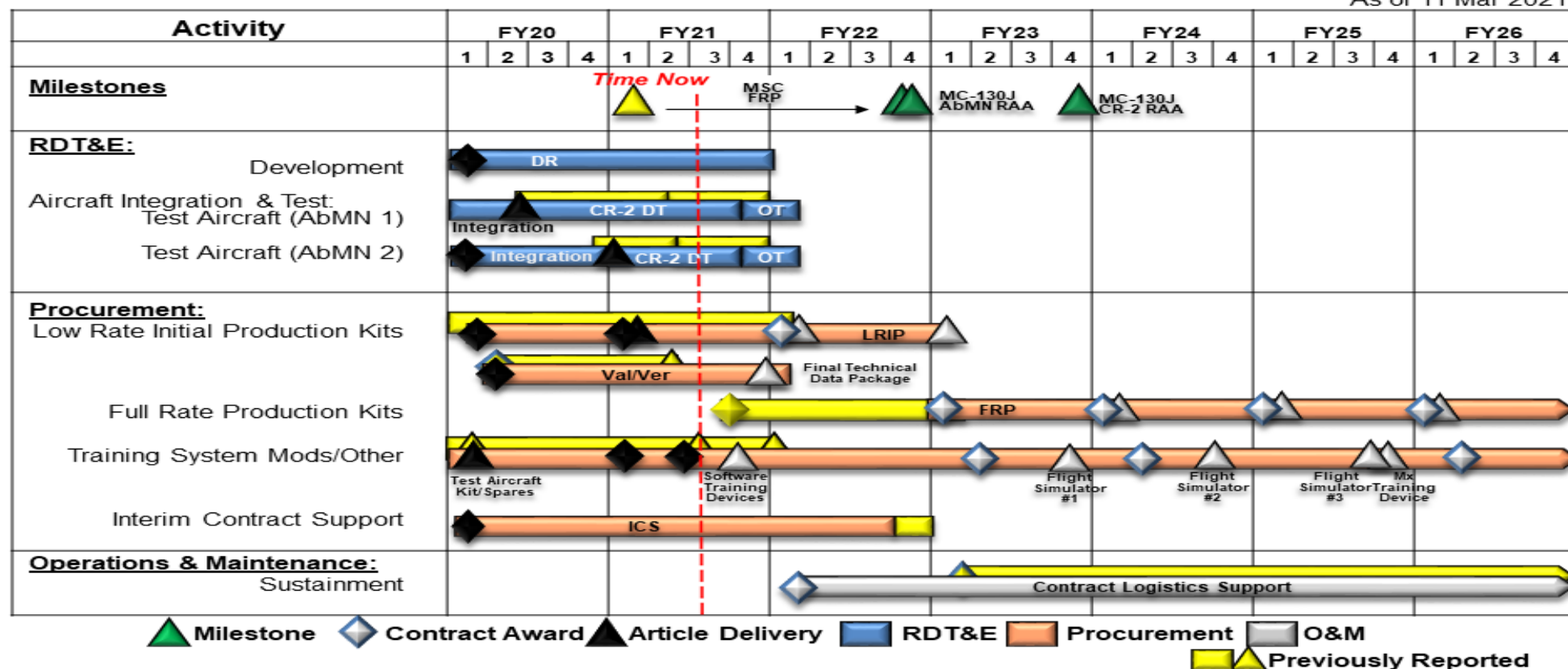
Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
S875 / AC/MC-130J

# Airborne Mission Networking (AbMN) Schedule

As of 11 Mar 2021



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

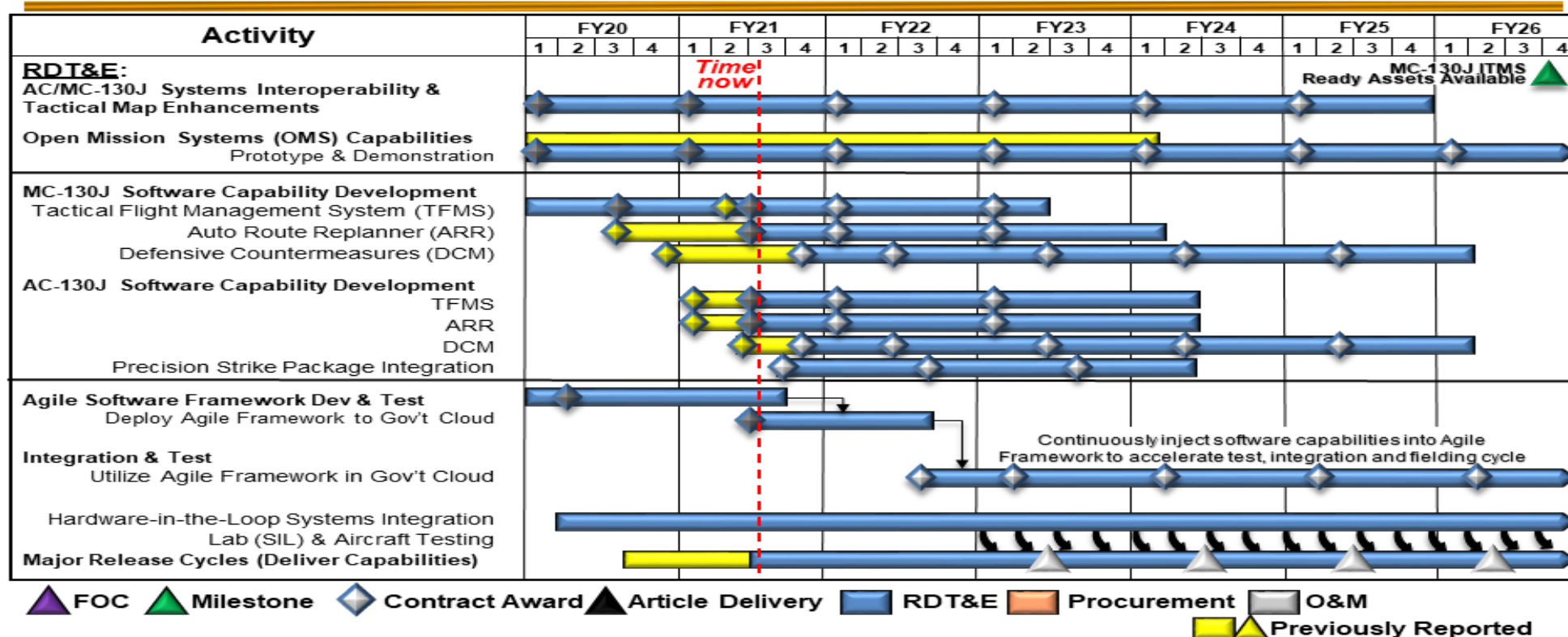
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
S875 / AC/MC-130J

## Integrated Tactical Mission Systems (ITMS) Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> S875 / AC/MC-130J	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>MC-130J Airborne Mission Networking (AbMN)</i></b>				
Engineering and Manufacturing Development	1	2020	4	2021
Phase II Design	1	2020	2	2020
Phase III Integration & Test (Includes Tech Data, Aircraft Integration, & Testing)	1	2020	1	2022
<b><i>Integrated Tactical Mission Systems (ITMS) Agile Based Software Integration &amp; Test</i></b>				
AC/MC-130J Systems Interoperability	1	2020	4	2025
Open Mission System (OMS) capabilities Prototype and Demonstration	1	2020	4	2026
MC-130J Tactical Flight Management System (TFMS)	1	2020	2	2023
MC-130J Auto Route Replanner (ARR)	2	2021	2	2024
MC-130J Defensive Countermeasures (DCM)	4	2021	2	2026
AC-130J TFMS	3	2021	2	2024
AC-130J ARR	3	2021	2	2024
AC-130J DCM	3	2021	2	2026
AC-130J Precision Strike Package	3	2021	2	2024
OMS Agile Software Development & Test	1	2020	3	2022
Test & Integration of ITMS Capabilities	3	2022	4	2026
Hardware-in-the-Loop Systems Integration Lab (SIL) & Aircraft Testing	1	2020	4	2026



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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) D615 / Rotary Wing Aviation			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
D615: Rotary Wing Aviation	254.252	44.152	41.864	42.787	-	42.787	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

This project provides for the development, rapid prototyping, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF)-unique rotary wing aviation and training requirements. This project includes modifications to Aircraft Survivability Equipment (ASE) avionics and weapons systems to counter rapidly emerging threats, address cyber security, improve lethality and enhance aircraft self-protection in contested environments. Rotary wing aircraft supported by this project include: MH-60M, MH-47G, and A/MH-6M. These aircraft provide aviation support to SOF in worldwide contingency operations and low-intensity conflicts. They must be capable of rapid deployment, undetected penetration of hostile areas, and operations at extended ranges under adverse weather conditions to infiltrate, provide logistics for, reinforce, and extract SOF. The anti-access/area denial (A2/AD) threat is characterized by an extensive and sophisticated ground based air defense system and an upgraded air-to-air capability targeted against helicopters.

## B. Accomplishments/Planned Programs (\$ in Millions)

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> A/MH-6M Block 3.0 Upgrade  <b>Description:</b> This effort funds the development and testing of Special Operations Forces Peculiar (SOF-P) equipment and modifications for the A/MH-6M. It will include software development and testing to integrate new capability, development and qualification of new hardware, and test and evaluation of new weapons, sensors, communications systems, or aircraft modifications that increase systems performance.  <b>FY 2021 Plans:</b> Begin software updates to incorporate communications upgrades and crypto modernization, follow-on testing on Block 3 components to improve sustainability, improved tail rotor blade development and test, improved main rotor transmission study, improved main rotor study, test and evaluate anti-jamming antennas, and weapons system test.  <b>FY 2022 Plans:</b> Continues software updates to incorporate communications upgrades and crypto modernization, follow-on testing on Block 3 components to improve sustainability, improved tail rotor blade development and test, improved main rotor transmission study, improved main rotor study, test and evaluate anti-jamming antennas, and weapons system test.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.055 million was made available to support emerging critical command requirements.	3.580	2.783	2.728
<b>Title:</b> MH-60M Modifications and Upgrades  <b>Description:</b> Develop critical technologies for MH-60 Block 2.0 safety, performance, and integration of the Army-common Improved Turbine Engine (ITE). The ITE program decreases operational costs, and transitions MH-60M engine sustainment back	6.272	3.428	2.824

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
to a service common program. Block 2.0 initiatives include, but are not limited to, Performance Restoration, MH-60 engineering changes and product improvements to SOF- P equipment, munitions utilized for testing, modifications to ASE and weapons systems designed to counter rapidly emerging threats, improved lethality, and enhanced aircraft self-protection in the Multi-Domain Operations (MDO) environment and against near peer threats. The MH-60 Block Upgrades provide the development, integration, and qualification efforts for the MH-60 helicopter to include flight test support, engineering analysis, documentation, and airworthiness substantiation.				
FY 2021 Plans: Complete testing of Joint Air-to-Ground Missile (JAGM) software and continue payload restoration efforts, and other technologies to improve safety and decrease operational costs to aircraft survivability equipment, weapons systems improvement and munitions.				
FY 2022 Plans: Begins testing and integration of Standoff Precision Guided Munitions (SOPGM) software and continues payload restoration efforts and other technologies to improve safety and decrease operational costs to aircraft survivability equipment, weapons systems improvement and munitions.				
FY 2021 to FY 2022 Increase/Decrease Statement: Decrease of \$0.604 million due to completion of JAGM testing.				
Title: Degraded Visual Environment (DVE)  Description: The DVE solution will provide MH-47/60 aircrews with visual cues for obstacle avoidance and aircraft control during all phases of flight and significantly increase crew and passenger survivability in DVE. This program addresses SOF-unique requirements for rapid fielding and weight limitations, and capitalizes integration of SOF-unique avionics with the unique skills of the SOF aviator.		2.397	4.048	-
FY 2021 Plans: Complete airworthiness release documentation for fielding.				
FY 2021 to FY 2022 Increase/Decrease Statement: Decrease of \$4.048 million is due to completion of airworthiness release documentation.				
Title: Future Vertical Lift (FVL)  Description: Provides for the development of United States Special Operations Command (USSOCOM) platform capabilities that address SOF-unique requirements. This family of systems significantly increases range, speed, payload, survivability, reliability, and maintainability of vertical lift aircraft to meet emerging mission requirements. USSOCOM will participate in the service-		1.160	3.324	9.059

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2020	FY 2021	FY 2022
common development of a joint FVL aircraft by injecting USSOCOM requirements and equities into the initial development and design efforts to minimize SOF-unique modifications to the common aircraft.					
FY 2021 Plans: Continue to provide guidance and infrastructure necessary for FVL to implement a mission systems architecture that enables the integration of SOF capabilities into the aircraft.					
FY 2022 Plans: Provides for delta cost design analysis of SOF Future Long Range Assault Aircraft (FLRAA) and Future Attack and Reconnaissance Aircraft (FARA); initiates FLRAA Structural Baseline support efforts and engineering analysis for Modular Open System Architecture (MOSA) implementation of Radio Frequency Countermeasures, TF/TA, Infrared Countermeasures, and DVE; continues SOF FLRAA configuration analysis.					
FY 2021 to FY 2022 Increase/Decrease Statement: Increase of \$5.735 million is due to cost design analysis of SOF FLRAA and FARA aircraft, FLRAA Structural Baseline support efforts and MOSA implementation of SOF peculiar mission equipment.					
Title: Infrared Countermeasures (IRCM)  Description: Provides a low Size, Weight, and Power (SWaP) IRCM capability suitable for the A/MH-6 Mission Enhanced Little Bird with potential use on the MH-60 and MH-47 aircraft. The IRCM program will leverage the Department of Navy developed Distributed Aperture Infrared Countermeasure System by integrating and testing a complete lightweight IRCM system to include a missile warning system and countermeasure capability. The IRCM program includes development of an infrared exhaust suppressor for the A/MH-6, and flare testing for emerging threats.			2.288	0.625	-
FY 2021 Plans: Continue advanced flare testing. Complete development and qualification testing of IR exhaust suppressor for the A/MH-6 aircraft.					
FY 2021 to FY 2022 Increase/Decrease Statement: Decrease of \$0.625 million is due to completion of IR exhaust suppressor development.					
Title: MH-47 Modifications and Upgrades  Description: Develops technologies to improve the performance and safety of the MH-47G and decrease operational costs. Efforts include, but are not limited to, the Active Parallel Actuator Subsystem (APAS), weight reduction, and performance improvement developments. This sub-project also includes modifications to Aircraft Survivability Equipment (ASE) and weapons systems to counter rapidly emerging threats and enhance aircraft self-protection.			8.806	8.455	3.949

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2020	FY 2021	FY 2022
<p><b>FY 2021 Plans:</b> Continue APAS development, including integration with MH-47G subsystems, such as Common Avionics Architecture System (CAAS).</p> <p><b>FY 2022 Plans:</b> Completes APAS development, including integration with MH-47G subsystems, such as CAAS, and execution of a configuration study of performance related improvements.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$4.506 million is due to completion of APAS development.</p>					
<p><b>Title:</b> Mission Processor Upgrades (MPU)</p> <p><b>Description:</b> Provides for non-recurring engineering (NRE), systems engineering/testing, and future aircraft architecture studies that support replacement and upgrade of the current mission and video processors for all Army Special Operations Aviation (ARSOA) rotary wing aircraft. Upgrading all internal processors increases the processing power to support critical functionality and emerging technologies that will be integrated into the Common Avionics Architecture System (CAAS). This MPU provides the processing and memory resources required to incorporate the following functions into the General Purpose Processing Unit (GPPU): (1) Global Air Traffic Management replaces ground-based navigation aids with a capability that meets the international requirement that all aircraft be compliant with digital and space-based navigation systems; (2) Cognitive Decision Aiding System fuses information on threat, route, weather, terrain, and friendly forces, instantaneously adjusting an aircraft's route to protect the flight crew in hazardous weather, low levels, night conditions, and next generation ARSOA cockpit.</p> <p><b>FY 2021 Plans:</b> Continue exploration of the next generation ARSOA cockpit, to include architectures studies/development and individual enabling/enhancing technologies.</p> <p><b>FY 2022 Plans:</b> Continues exploration of the next generation ARSOA cockpit, to include architectures studies/development and individual enabling/enhancing technologies.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.934 million is due to the exploration of next generation tactical communication technologies.</p>			0.140	0.588	1.522
<p><b>Title:</b> Tactical (Airborne) Mission Networking (TMN)</p> <p><b>Description:</b> Provides for continued development of systems (software and hardware) to enable the aircraft to effectively adapt and overcome the challenges of the highly contested and congested Radio Frequency (RF) environment. This effort will enable the aircrew to use advanced radio waveforms and communications equipment that can survive and thrive in contested</p>			-	3.000	-

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2020	FY 2021	FY 2022
and congested radio frequency environments. Upgrading antennas, processors, radios and other enabling communications equipment will be a persistent requirement as the RF environment becomes increasingly more complex. Additionally, the Army intends to upgrade its networks every two years – so this funding will ensure Special Operations Aircraft can adapt and keep pace with both SOF and conventional forces’ communications and networking improvements/upgrades.  <b>FY 2021 Plans:</b> Begin to develop software and hardware to rapidly incorporate advanced waveforms, advanced communications, and networking hardware onto the ARSOA aircraft.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$3.000 million was made available to support emerging critical Command requirements.					
<b>Title:</b> ASE Radio Frequency Countermeasures (RFCM) Upgrades  <b>Description:</b> Develops, integrates, and tests critical active and passive SOF-P aircraft survivability equipment to counter the acknowledged high proliferation of advanced surface-to-air threat systems for the A/MH-6, MH-60, and MH-47. These threat systems are evolving technically at an unprecedented rate, requiring rapid countermeasure system development and immediate spiraled improvements that will reduce the probability of successful engagement, increase the probability of detecting and countering threat systems, and improve the aircraft's ability to continue operating after sustained battle damage. This program includes development and testing of both new systems and Pre-Planned Product Improvements (P3I)/upgrades of fielded survivability equipment, and associated qualification testing. P3I upgrades may include, but are not limited to, expansion of loadsets on existing systems, modernization of legacy components, and studies directed at potential "collaborative off-boarding/ on-boarding" detect/countermeasure capabilities to provide expanded coverage for aircrews in a high threat environment.  <b>FY 2021 Plans:</b> Continue development of new systems, P3I/upgrades of fielded survivability equipment, and continues development of countermeasures. Additional details can be provided under separate cover.  <b>FY 2022 Plans:</b> Continues development of new systems, P3I/upgrades of fielded survivability equipment, and continues development of countermeasures. Additional details can be provided under separate cover.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$7.092 million is due to ASE upgrades. Additional details can be provided under separate cover.			11.794	15.613	22.705
Accomplishments/Planned Programs Subtotals			36.437	41.864	42.787
			FY 2020	FY 2021	
Congressional Add: Future Vertical Lift (FVL)			7.715	-	

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**Exhibit R-2A, RDT&E Project Justification:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / Aviation Systems	<b>Project (Number/Name)</b> D615 / Rotary Wing Aviation
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	FY 2020	FY 2021
<b>FY 2020 Accomplishments:</b> Provides engineering and design work to ensure SOF-unique requirements are incorporated in the baseline Army aircraft. The program has awarded task orders to Bell and Lockheed Martin through TDD for SOF-FARA variant engineering studies, funded FVL FLRAA engineering studies for SOF variants, and awarded contract to GTRI to initiate SOA CAAS / MOSA studies.		
<b>Congressional Adds Subtotals</b>	7.715	-

## C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• PROC/0201RWUPGR: Rotary Wing Upgrades and Sustainment	177.483	211.041	202.278	-	202.278	-	-	-	-	-	-
• 0201MH60: MH-60 Blackhawk	25.264	-	29.900	-	29.900	-	-	-	-	-	-
• 0601MH47: MH-47 Chinook	201.093	135.482	130.485	-	130.485	-	-	-	-	-	-

## Remarks

## D. Acquisition Strategy

- A/MH-6M Block 3.0 Upgrade comprises three distinct efforts: integrated airframe, Block 3 performance kits and avionics upgrades. The airframe efforts (new rotor blades/flight control kits and new shells) will be a sole-source contract to Boeing, owner of the technical data associated with the A/MH-6 airframes. The cockpit avionics architecture will be developed by Collins Aerospace. Any new hardware components will be Non Developmental Item/Commercial-Off-The-Shelf (COTS) to the extent possible and will be competitively selected. Airframe modification and integration work will be conducted via a contract with Special Operations Forces Support Activity (SOFSa).
- MH-60M Modifications and Upgrades supports systems integration and qualification efforts on MH-60M helicopters. The Mods and Upgrades are executed via various acquisition vehicles and includes, but are not limited to, government and contractor flight test support, engineering analysis, documentation, and airworthiness substantiation. Airframe modification and integration work will be conducted via a contract with SOFSa.
- DVE integrates and qualifies a solution to address a safety of flight issue while flying in DVE. A competitive source selection process was conducted, resulting in down-selection of one vendor for the DVE solution which will procure, integrate, and install components to provide real-time "see through" imagery and visual cues for obstacle avoidance and landing zone information during all phases of flight.
- FVL is the SOF aviation participation in the Joint FVL effort to develop the next generation of vertical takeoff and landing aircraft and establishes the foundation for the transformation of DOD vertical lift aviation capabilities over the next forty years.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> D615 / <i>Rotary Wing Aviation</i>
<ul style="list-style-type: none"> <li>• IRCM integrates a mission configurable Missile Warning System and IRCM capability at a weight suitable for the A/MH-6M aircraft. Procurement of systems for integration and test will leverage Department of Navy IRCM development efforts and contracts. The government will integrate the systems onto the A/MH-6 utilizing existing aircraft modification contracts. Will begin evaluation and qualification of an infrared exhaust suppressor for the A/MH-6M aircraft, and continue flare testing for emerging threats.</li> <li>• MH-47 Modifications and Upgrades will develop technologies to improve performance and safety of the MH-47G and decrease operational costs. Efforts include the APAS, weight reduction, and performance improvement developments. The upgrades and modifications are executed via various acquisition vehicles and consist mostly of government and contractor executed integration, testing, and qualification efforts with some analytical engineering services to be completed. Post-production block modifications are accomplished via a contract with SOFSA.</li> <li>• MPU provides for future cockpit architecture studies that will help define the replacement of current mission and video processors for all ARSOA platforms. Additionally it will address near term required upgrades to existing components. Potential upgrades will be through existing Original Equipment Manufacturers (OEM), while the future cockpit architecture studies will be competitively awarded.</li> <li>• Tactical (Airborne) Mission Networking provides for future communications and networking capability exploration and solution development that will ensure ARSOA platforms can communicate through voice and data in a highly contested and congested RF environment. Additionally, it will ensure ARSOA aircraft can maintain interoperability with the SOF and conventional ground forces' plan of rapidly and continually updating their communications and networking infrastructure. Non-developmental communication equipment will be procured through existing DOD contracts. Aircraft integration will be through existing aircraft modification contracts.</li> <li>• ASE RFCM Upgrades develops and tests both new systems and pre-planned product improvements/upgrades of fielded aircraft survivability systems and countermeasures. For new systems, other services' development and testing contracts are leveraged to the maximum extent possible. Upgrades of fielded equipment are typically accomplished by the OEM.</li> <li>• IRES RDT&amp;E funds not required due to maturity of selected COTS solution; funds realigned to Degraded Visual Environment System enhancements.</li> </ul>		

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**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / Aviation Systems	<b>Project (Number/Name)</b> D615 / Rotary Wing Aviation
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Degraded Visual Environment (DVE)	C/Various	PM TAPO : Fort Eustis, VA	69.748	2.397	Apr 2020	4.048	Jun 2021	-		-		-	0.000	76.193	-
Future Vertical Lift (FVL)	C/Various	PM TAPO : Ft. Eustis, VA	-	-		2.991	Dec 2020	8.396	Dec 2021	-		8.396	Continuing	Continuing	-
FVL Congressional Add (Cong Add)	C/Various	PM TAPO : Ft. Eustis, VA	-	7.356	Sep 2020	-		-		-		-	0.000	7.356	-
MH-47 Modifications and Upgrades	C/Various	PM TAPO : Fort Eustis, VA	41.931	8.806	Nov 2019	8.455	Nov 2020	3.949	Nov 2021	-		3.949	Continuing	Continuing	-
Tactical (Airborne) Mission Networking (TMN)	C/Various	PM TAPO : Fort Eustis, VA	-	-		3.000	Mar 2021	-		-		-	Continuing	Continuing	-
Aircraft Survivability Equipment (ASE) Radio Frequency Countermeasures (RFCM) Upgrades	C/Various	PM TAPO : Fort Eustis, VA	16.439	11.794	Mar 2020	15.613	Mar 2021	22.705	Mar 2022	-		22.705	Continuing	Continuing	-
Prior Years Funding	C/Various	PM MELB : Fort Eustis, VA	49.820	-		-		-		-		-	0.000	49.820	-
<b>Subtotal</b>			177.938	30.353		34.107		35.050		-		35.050	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FVL	C/Various	PM TAPO : Fort Eustis, VA	4.053	1.160	Aug 2020	0.333	Nov 2021	0.663	Nov 2021	-		0.663	Continuing	Continuing	-
FVL (Cong Add)	C/Various	PM TAPO : Fort Eustis, VA	-	0.359	Sep 2020	-		-		-		-	0.000	0.359	-
<b>Subtotal</b>			4.053	1.519		0.333		0.663		-		0.663	Continuing	Continuing	N/A



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**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / Aviation Systems	<b>Project (Number/Name)</b> D615 / Rotary Wing Aviation
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Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A/MH-6M Block 3.0 Upgrades	C/Various	PM MELB : Fort Eustis, VA	32.036	3.580	Jan 2020	2.783	Apr 2021	2.728	Jan 2022	-		2.728	Continuing	Continuing	-
MH-60M Modification and Upgrades	C/Various	PM TAPO : Fort Eustis, VA	7.577	6.272	Mar 2020	3.428	Apr 2021	2.824	Mar 2022	-		2.824	Continuing	Continuing	-
Infrared Countermeasures Integration and Testing (IRCM)	C/Various	PM TAPO : Fort Eustis, VA	12.663	2.288	Feb 2020	0.625	May 2021	-		-		-	0.000	15.576	-
Mission Processor Upgrades (MPU)	C/Various	PM TAPO : Fort Eustis, VA	0.862	0.140	Apr 2020	0.588	Apr 2021	1.522	Apr 2022	-		1.522	Continuing	Continuing	-
Prior Years Funding	C/Various	Various : Various	19.123	-		-		-		-		-	0.000	19.123	-
<b>Subtotal</b>			72.261	12.280		7.424		7.074		-		7.074	Continuing	Continuing	N/A
			<b>Prior Years</b>	<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022 Base</b>		<b>FY 2022 OCO</b>		<b>FY 2022 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			254.252	44.152		41.864		42.787		-		42.787	Continuing	Continuing	N/A

**Remarks**

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

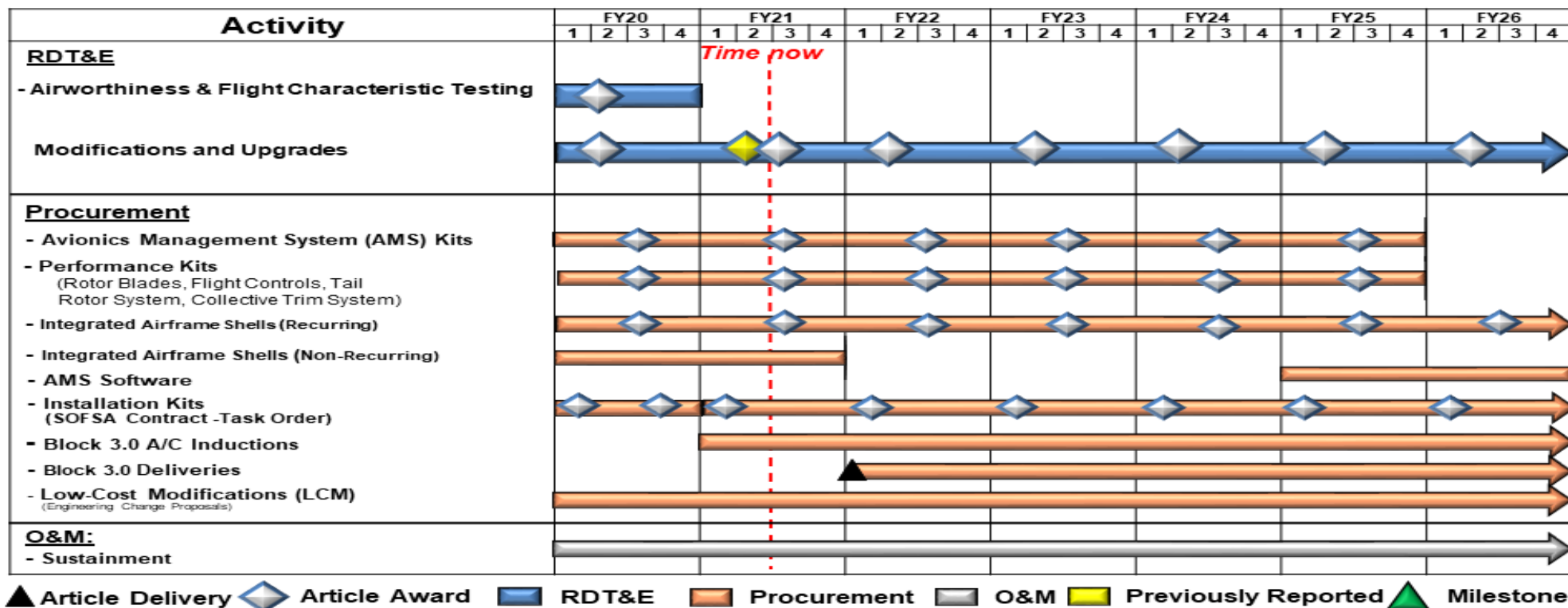
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
D615 / Rotary Wing Aviation

# A/MH-6 Program Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

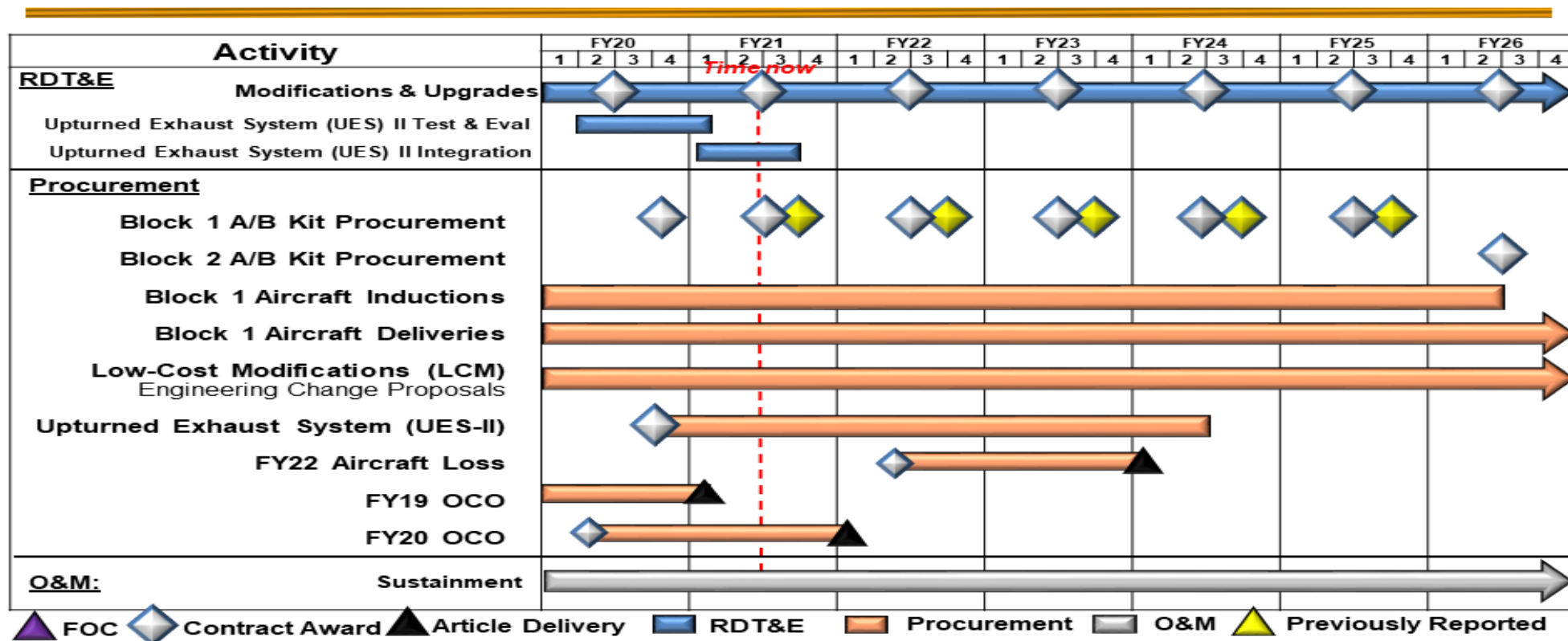
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
D615 / Rotary Wing Aviation

# MH-60M Program Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

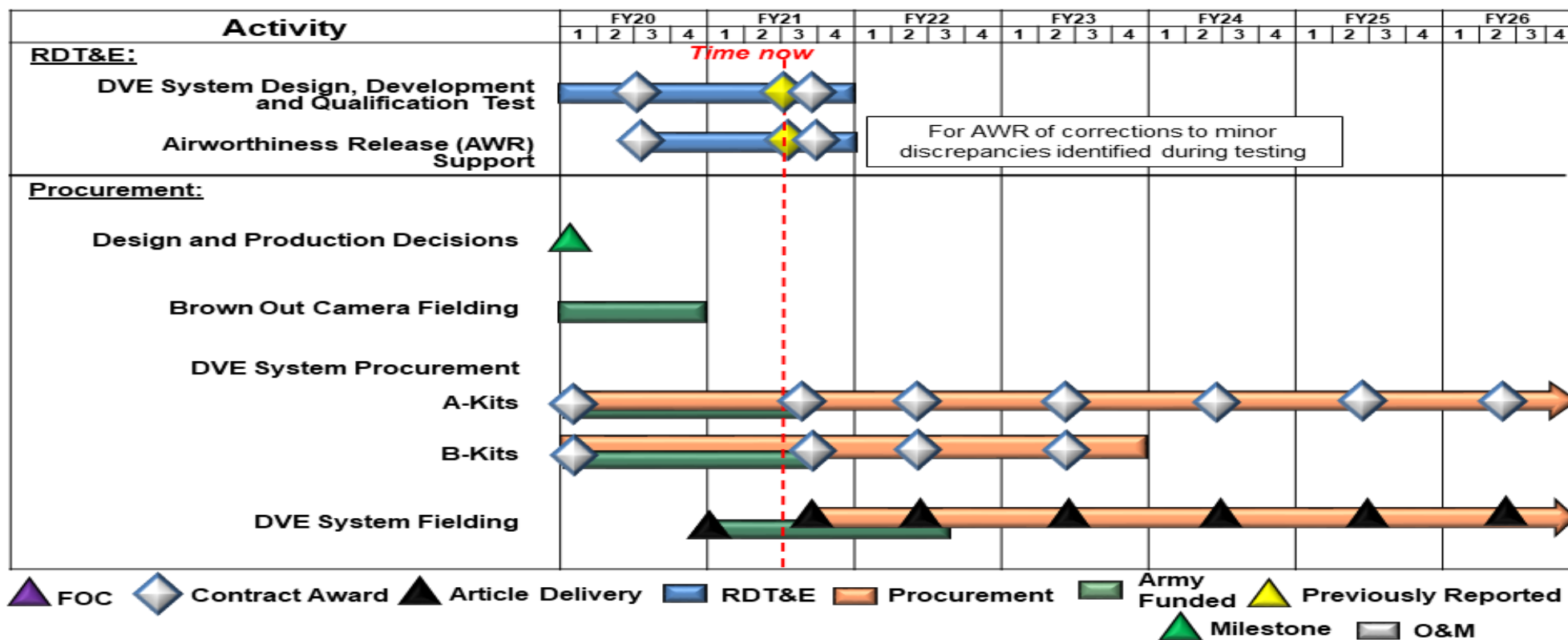
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
D615 / Rotary Wing Aviation

# Degraded Visual Environment (DVE) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

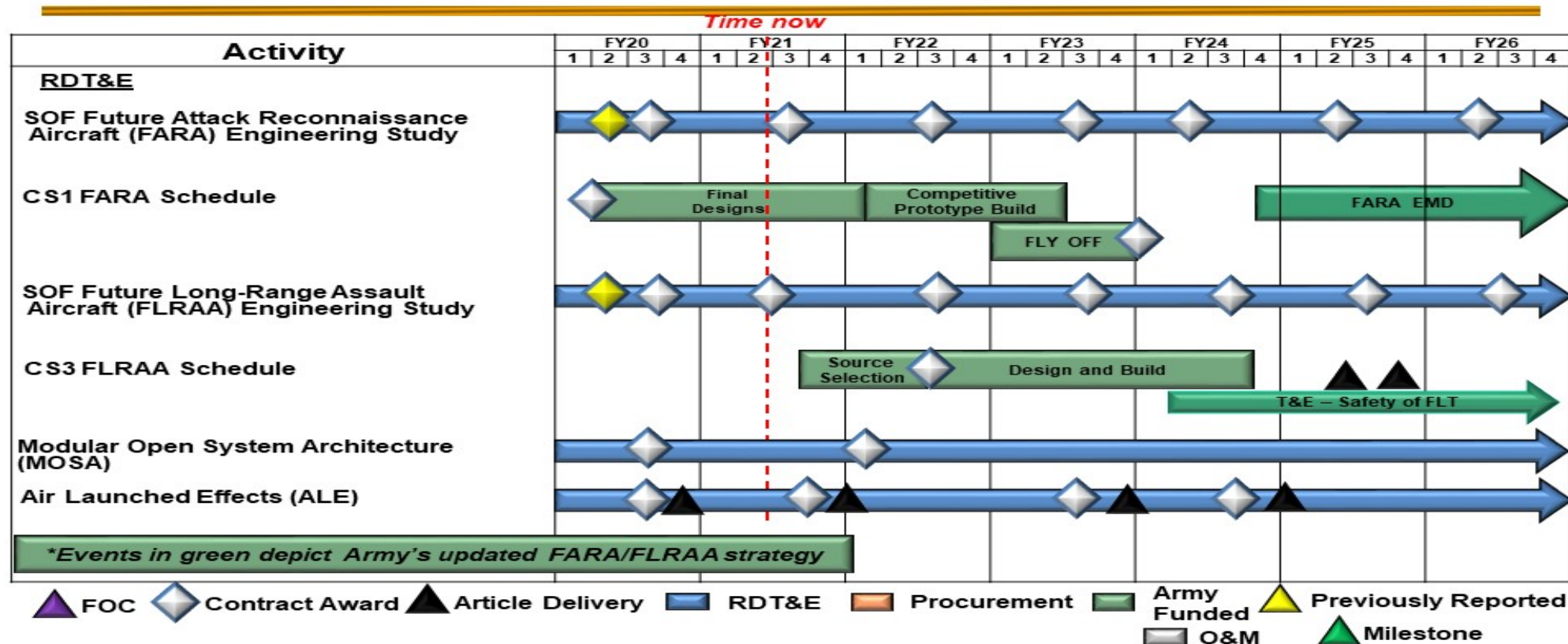
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
D615 / Rotary Wing Aviation

# Future Vertical Lift Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

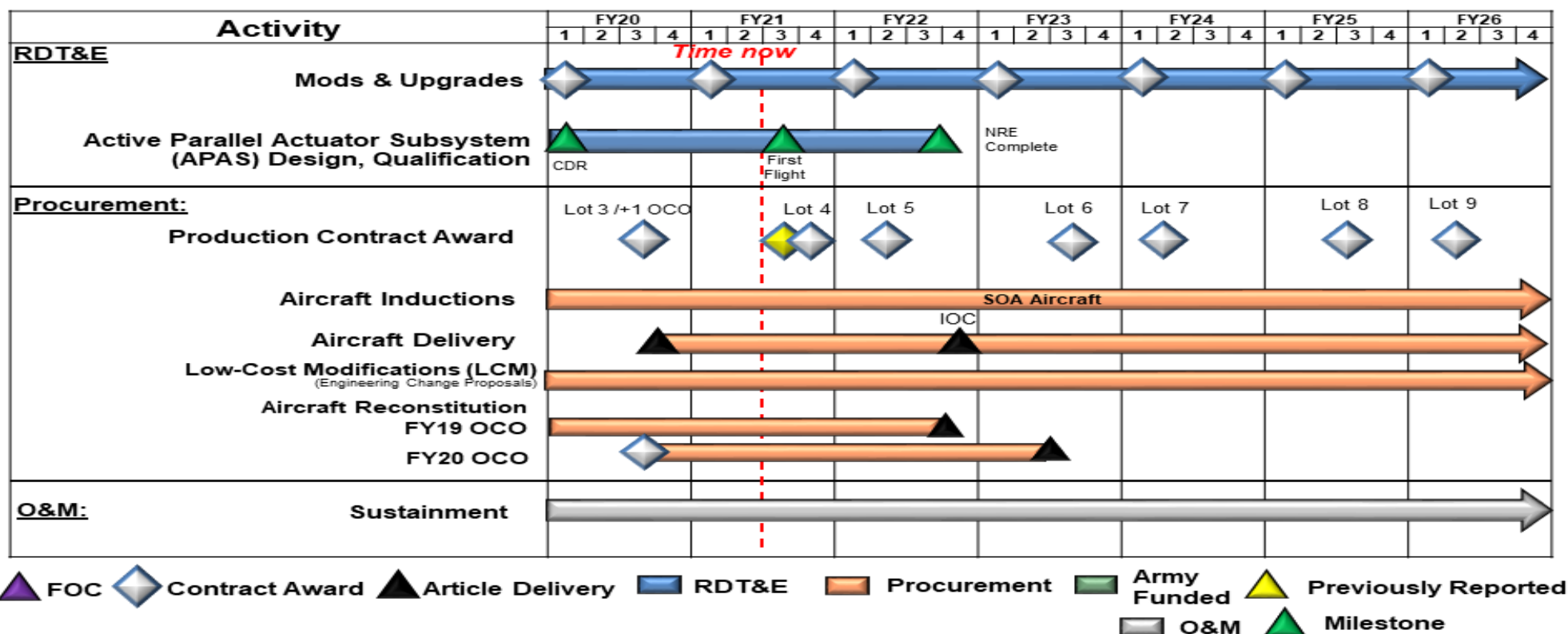
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
D615 / Rotary Wing Aviation

# MH-47 Program Schedule





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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

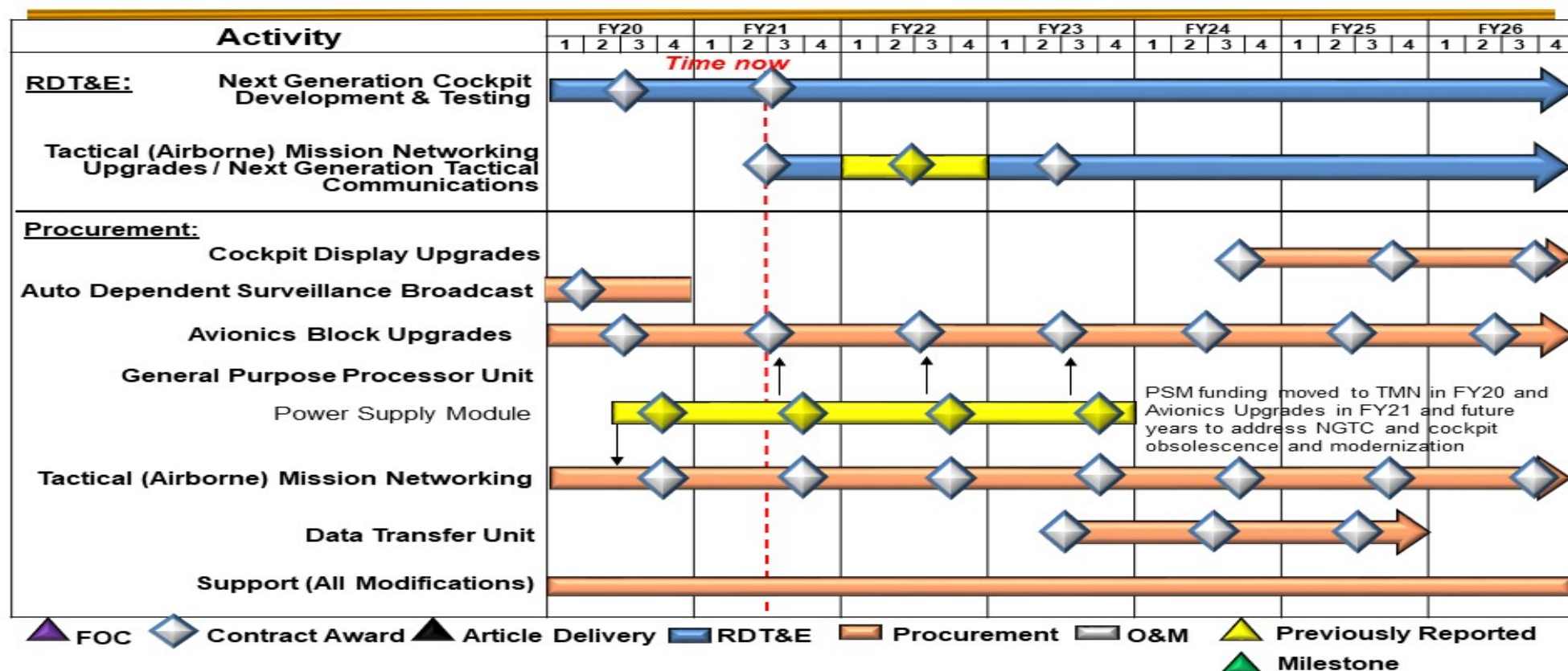
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
D615 / Rotary Wing Aviation

# Mission Processor Upgrades Schedule



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**Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command**

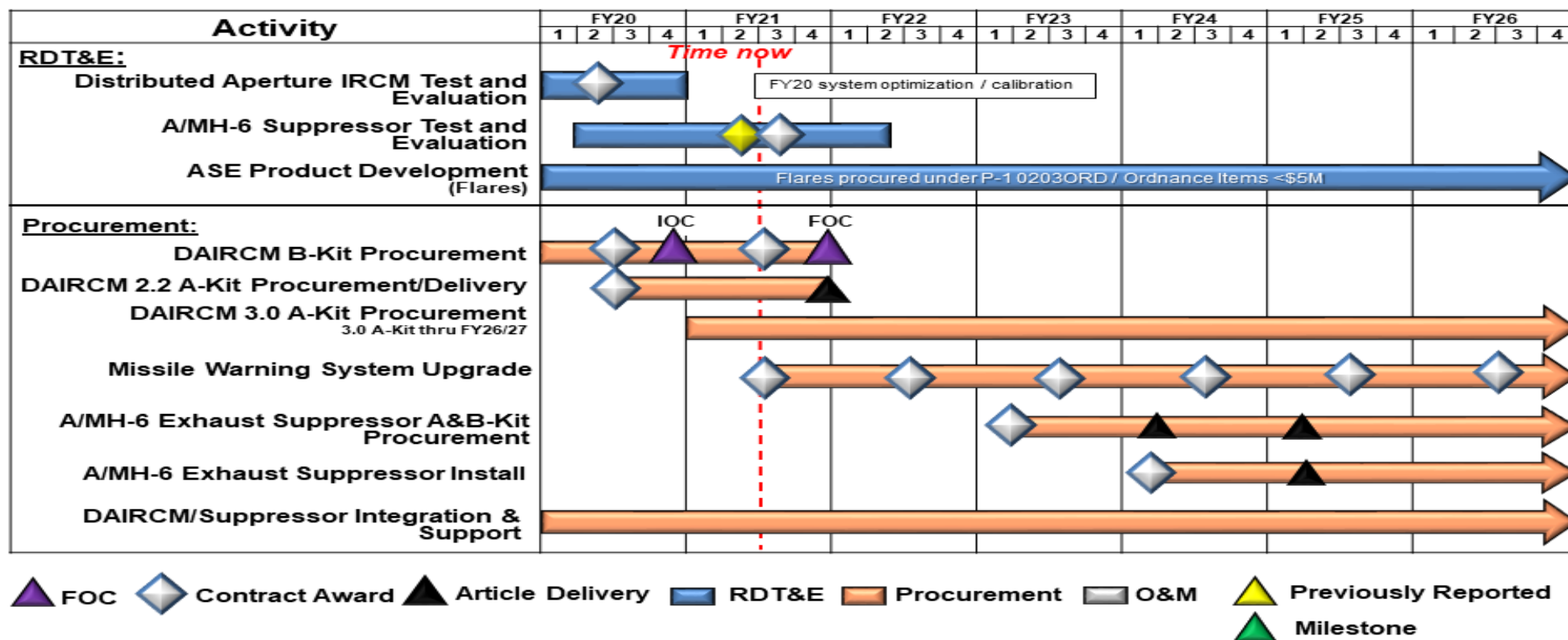
<b>Date:</b> May 2021
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**Appropriation/Budget Activity**  
0400 / 7

**R-1 Program Element (Number/Name)**  
PE 1160403BB / *Aviation Systems*

<b>Project (Number/Name)</b>	D615 / <i>Rotary Wing Aviation</i>
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## Aircraft Survivability Equipment (ASE) Infrared Countermeasures (IRCM) Schedule





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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

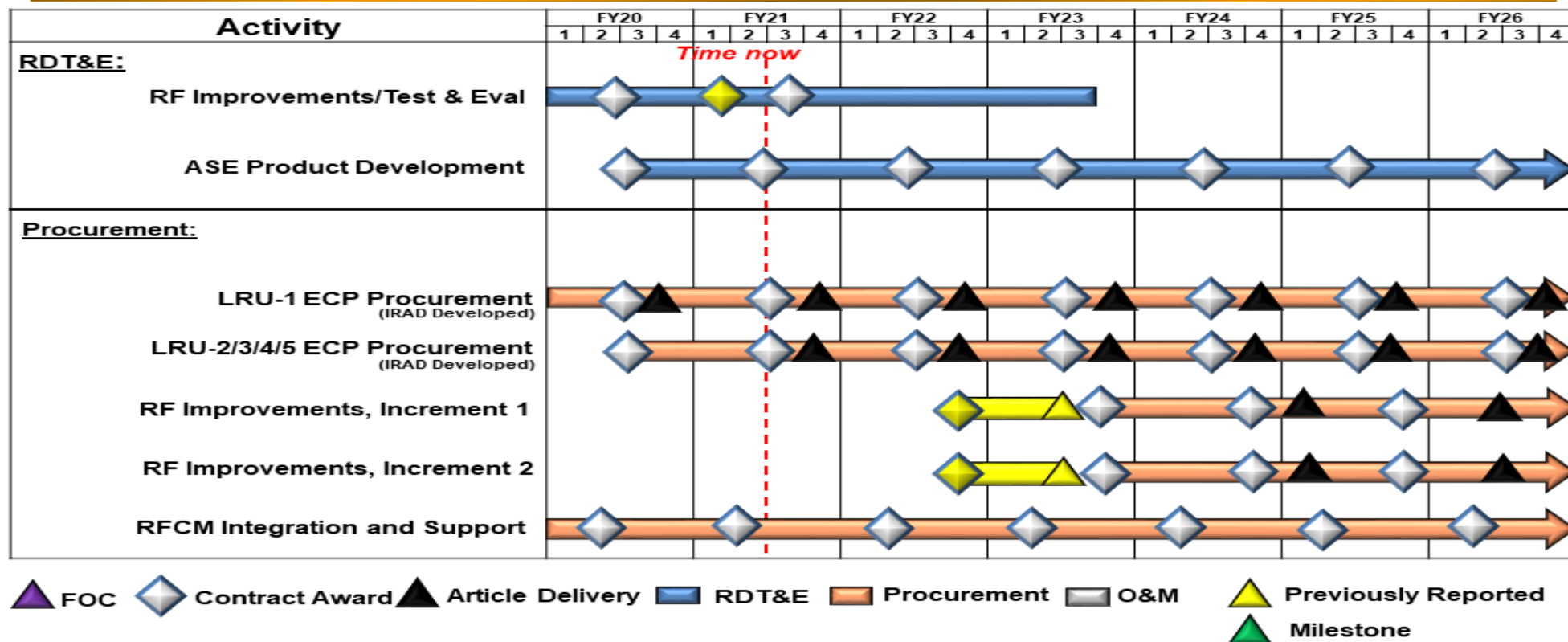
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160403BB / Aviation Systems

Project (Number/Name)  
D615 / Rotary Wing Aviation

# Aircraft Survivability Equipment (ASE) Radio Frequency Countermeasures (RFCM) Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / Aviation Systems	<b>Project (Number/Name)</b> D615 / Rotary Wing Aviation	

**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>A/MH-6M Block 3.0 and Modifications</i></b>				
Airworthiness and Flight Characteristics Testing	1	2020	4	2020
Modifications and Upgrades	1	2020	4	2026
<b><i>MH-60M Modifications and Block Upgrades</i></b>				
Modifications and Upgrades	1	2020	4	2026
Upturned Exhaust System (UES) II Test & Eval	2	2020	1	2021
UES II Integration	1	2021	3	2021
<b><i>Degraded Visual Environment (DVE)</i></b>				
Design, Development, and Qualification Test	1	2020	4	2021
Airworthiness Release (AWR) Support	3	2020	4	2021
<b><i>Future Vertical Lift (FVL)</i></b>				
SOF Future Attack Reconnaissance Aircraft (FARA) Engineering Study	1	2020	4	2026
SOF Future Long-Range Assault Aircraft (FLRAA) Engineering Study	1	2020	4	2026
Modular Open Systems Architecture	1	2020	4	2026
Air Launched Effects	1	2020	4	2026
<b><i>MH-47 Program</i></b>				
Modifications and Upgrades	1	2020	4	2026
Active Parallel Actuator Subsystem (APAS) Design, Qualification	1	2020	3	2022
<b><i>Mission Processor Upgrades (MPU)</i></b>				
Next Generation Cockpit Development and Testing	1	2020	4	2026
Tactical (Airborne) Mission Networking Upgrades / Next Generation Tactical Communications	2	2021	4	2026
<b><i>Aircraft Survivability Equipment (ASE) Infrared Countermeasures (IRCM)</i></b>				

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160403BB / <i>Aviation Systems</i>	<b>Project (Number/Name)</b> D615 / <i>Rotary Wing Aviation</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Distributed Aperture Infrared Countermeasure Test and Evaluation	1	2020	4	2020
A/MH-6 Suppressor Test and Evaluation	1	2020	2	2022
ASE Product Development (Flare)	1	2020	4	2026
<b><i>Aircraft Survivability Equipment (ASE) Radio Frequency Countermeasures (RFCM)</i></b>				
RF Improvements Test and Evaluation	1	2020	4	2023
ASE Product Development	3	2020	4	2026

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					<b>R-1 Program Element (Number/Name)</b> PE 1160405BB / <i>Intelligence Systems Development</i>							
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	603.325	15.349	26.519	32.766	-	32.766	-	-	-	-	-	-
S400: <i>SO Intelligence Systems</i>	603.325	15.349	26.519	32.766	-	32.766	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This program element is part of the Military Intelligence Program (MIP) that provides for the identification, development, rapid prototyping and testing of Special Operations Forces (SOF) intelligence equipment to identify and eliminate deficiencies in providing timely intelligence to deployed forces. Sub-projects address the primary areas of intelligence dissemination, sensor systems, tagging, tracking, and locating devices, integrated threat warning to SOF mission platforms, biometrics and forensic site exploitation and tactical exploitation of national system capabilities. United States Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Command, Control, Communications, Computers, and Intelligence (C4I) systems continue to provide SOF with the required capabilities into the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration with the Global Information Grid (GIG). The GIG allows SOF elements to operate with any force combination in multiple environments. These technologies will be pursued via rapid prototyping efforts when appropriate.

The FY 2022 funding request was reduced by \$1.759 million to account for the availability of prior year execution balances.

FY 2022 Fiscal Balancing: -\$1.292 million decrease is attributed to the reductions necessary to accommodate budget realities and directed strategy driven changes. Reduces Joint Threat Warning System development and testing of SOF peculiar Space payloads.

<b>B. Program Change Summary (\$ in Millions)</b>	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	15.484	19.558	20.142	-	20.142
Current President's Budget	15.349	26.519	32.766	-	32.766
Total Adjustments	-0.135	6.961	12.624	-	12.624
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-0.039			
• Congressional Rescissions	-	-			
• Congressional Adds	-	7.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.135	-	12.624	-	12.624

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>		<b>R-1 Program Element (Number/Name)</b> PE 1160405BB / <i>Intelligence Systems Development</i>	
<b><u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u></b>		<b>FY 2020</b>	<b>FY 2021</b>
<b>Project:</b> S400: <i>SO Intelligence Systems</i>			
Congressional Add: <i>SSE - DOMEX Program</i>		-	7.000
Congressional Add Subtotals for Project: S400		-	7.000
Congressional Add Totals for all Projects		-	7.000
<b><u>Change Summary Explanation</u></b>			
Funding:			
FY 2020: Decrease of \$0.135 million was made available to support emerging command requirements in the year of execution.			
FY 2021: Net increase of \$6.961 million is due to Congressional add to continue rapid test and evaluation of emerging Biometric and Forensic technology (\$7.000 million) and a Defense Wide (DW) non-programmatic reduction (\$0.039 million).			
FY 2022: Net increase of \$12.624 million is due to USSOCOM conducting a comprehensive analysis of future capabilities in support of the Interim National Security Strategy Guidance (INSSG). The National Systems Support to SOF (NSSS) program received increased funds (\$4.815 million) to further the innovation and development of space-based Intelligence, Surveillance, and Reconnaissance (ISR) technologies and system enhancements, and rapid prototype development for transition to existing SOCOM programs of record. JTWS funding decreased (-\$1.318 million) due to the Maritime variant transitioning into production. Increased funds to HF-TTL (\$4.553 million) and TVS/RSTA (\$1.681 million) will support Unmanned Aerial Systems (UAS) and space-based development efforts; pursue alternate precision, navigation, and timing (ALT PNT) and Low Probability of Intercept/Low Probability of Detection (LPI/LPD) Government-off-the-Shelf (GOTS) capabilities; and Unattended Ground and Maritime sensor integration efforts. The following decreases were made in support of critical emerging command priorities: ISP (-\$0.036 million); SOFPREP (-\$0.012 million); SSE (-\$0.105 million). Classified details for the increase of (\$2.481 million) are provided under separate cover. Silent Dagger funding increase (\$0.565 million) supports research and development for modernization of Signals Intelligence Processing, Exploitation, Dissemination (SIGINT PED) capability and technology insertion roadmap efforts; funding was transferred from PE 0305208BB; Project S400A, Distributed Common Ground/Surface Systems.			
Schedule: None.			
Technical: None.			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 1160405BB / <i>Intelligence Systems Development</i>				<b>Project (Number/Name)</b> S400 / <i>SO Intelligence Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S400: <i>SO Intelligence Systems</i>	603.325	15.349	26.519	32.766	-	32.766	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This sub-project is part of the Military Intelligence Program (MIP). Provides for the identification, development, testing, and rapid prototyping of Special Operations Forces (SOF) intelligence equipment to identify and eliminate deficiencies in providing timely intelligence to deployed forces. Sub-projects address the primary areas of intelligence dissemination, sensor systems, tagging, tracking, and locating devices, integrated threat warning to SOF mission platforms, and SOF-unique support from space systems, including Tactical Exploitation of National System Capabilities (TENCAP). The systems developed and tested in this line item are National Systems Support to SOF (NSSS); Joint Threat Warning System (JTWS); Hostile Forces - Tagging, Tracking, and Locating (HF-TTL); Special Operations Tactical Video System/ Reconnaissance, Surveillance, and Target Acquisition (TVS/RSTA); SOF Planning, Rehearsal and Execution Preparation (SOFPREP); Integrated Survey Program (ISP); Sensitive Site Exploitation (SSE); and Silent Dagger (SDAG).

United States Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Command, Control, Communications, Computers, and Intelligence (C4I) systems continue to provide SOF with the required capabilities throughout the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration with the Global Information Grid (GIG). The GIG allows SOF elements to operate with any force combination in multiple environments. The intelligence programs funded in this project will meet annual emergent requirements.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	FY 2020	FY 2021	FY 2022
<b>Title:</b> NSSS	0.862	0.879	5.712
<p><b>Description:</b> NSSS provides research and development, and rapid prototyping to support HQ SOCOM TENCAP program and supporting capabilities. NSSS improves the combat effectiveness of USSOCOM, its components, and the Theater Special Operations Commands (TSOC) by providing innovative space-based Intelligence, Surveillance, and Reconnaissance (ISR) technologies and system enhancements, products, and special communications capabilities to tactical SOF units. NSSS leverages current and developmental National systems to integrate with, augment, and support SOCOM systems. Focus areas include Geo-spatial Intelligence (GEOINT), Signals Intelligence (SIGINT), Special Communications, and intelligence fusion, reporting, and dissemination. NSSS efforts are characterized by rapid prototype development to transition to SOCOM Programs of Record.</p> <p><b>FY 2021 Plans:</b></p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160405BB / <i>Intelligence Systems Development</i>	<b>Project (Number/Name)</b> S400 / <i>SO Intelligence Systems</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
<p>Continue development of SOF-required prototype capabilities, primarily through leveraging current or developing technologies and assets, while coordinating with SOCOM operators and Programs of Record for production and operational fielding of successful capabilities. Emphasis areas include ISR support for Tagging, Tracking, and higher-accuracy Geo-locating of hostile and friendly forces, especially in low sensor density environments, and providing timely intelligence to deployed forces.</p> <p><b>FY 2022 Plans:</b> Continues development of SOF-required prototype capabilities, primarily through leveraging current or developing technologies and assets, while coordinating with SOCOM operators and Programs of Record for production and operational fielding of successful capabilities. Emphasis areas include development of the Combined Intelligence Picture-All Source transceiver capability that leverages existing national space assets and long range precision fires integration with space based systems.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$4.833 million is due to USSOCOM conducting comprehensive analysis of future capabilities and added funds to NSSS program in support of the Interim National Security Strategy Guidance (INSSG). These additional funds will support the development of software and hardware to improve SOF access, content, and timeliness of data from national and commercial space assets in near peer threat environments.</p>			
<p><b>Title:</b> JTWS</p> <p><b>Description:</b> The JTWS System of Systems (SoS) enables the SOF Cryptologic and Cyber Enabling Joint Operator to collect, process, locate and exploit threat communications signals of interest in order to provide timely, relevant, and responsive intelligence, networked, cross-cueing, enhanced target acquisition, and threat warning avoidance information directly to SOF Commanders. Intelligence gathered is then transposed to National Databases. The JTWS is focused on multiple areas; Ground, Maritime, Air; Unmanned Aerial Systems (UAS), and Cyber Enabling. Each area has additional requirements for Communications Intelligence, Electronic Intelligence, and Precision Geo-location.</p> <p><b>FY 2021 Plans:</b> Continue modular/scalable, open architecture, development and testing (D&amp;T), and software defined solutions. Continue development of technologies with a focus on Near Peer signals of interest (SOIs). Focus hardware and software improvements that cyber harden our kits for Great Power Competition. Begin technical evaluation of machine learning and human language translation technology insertion into our existing systems to reduce SOF Operator workload. Perform developmental and operational testing on Maritime Electronic Intelligence capability for rapid fielding and deployment.</p> <p><b>FY 2022 Plans:</b> Continues D&amp;T of modular/scalable, open architecture, and software defined solutions. Continues efforts directed towards the modularity of technologies. Begins the development of software defined, cyber hardened technologies. Continues technical</p>		11.890	14.362
			11.661



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160405BB / <i>Intelligence Systems Development</i>	<b>Project (Number/Name)</b> S400 / <i>SO Intelligence Systems</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
evaluation of machine learning and human language translation technologies for all variants in order to reduce SOF operator workload. Continues improvement of technology for Near Peer signals of interest.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$2.701 million is due to the Maritime Variant moving from Research & Development to Production.			
<b>Title:</b> HF-TTL		1.078	1.440
<b>Description:</b> This program provides SOF with the necessary tools to find, fix, and finish target assets through the emplacement of sophisticated tags and devices that feed into an integrated architecture. HF-TTL provides Global Combatant Commanders (GCC) and SOF operators with an immediate capability to tag, track, and locate people, things, and activities. The HF-TTL program provides actionable intelligence for SOF mission planners. The mission sets comprise a mix of different classes of tags and their associated detection, interrogation, viewing, tracking, and communications systems that are fielded annually to SOF Components and TSOC based upon dynamic and emergent SOF operational requirements.			6.400
<b>FY 2021 Plans:</b> Continue rapid prototyping, specialized device modifications, product development support, integration and operational testing and evaluation in support of UAS payload integration, maritime specialized tags development, and Low Probability of Intercept/Low Probability of Detection (LPI/LPD) waveform refinements.			
<b>FY 2022 Plans:</b> Continues integration and operational testing and evaluation in support UAS payload integration LPI/LPD waveform refinement, and small satellite payload development efforts.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$4.960 million is to support development efforts associated with a multi-tag TTL receiver payload for small satellite integration and testing.			
<b>Title:</b> TVS/RSTA		0.669	1.134
<b>Description:</b> This program provides SOF with critical Special Reconnaissance (SR) equipment that directly supports the planning and execution of SOF missions. This capability allows the SOF warfighter to meet SOF SR mission requirements to find, fix, finish, exploit, analyze, and disseminate information of an adversary's movement, construct, identification, location, and associated activities. TVS/RSTA provides Global Combatant Commands and SOF operators with an immediate capability to visually and electronically acquire people, things, and activities and provides actionable intelligence for SOF planners and Commanders. The program Family of Systems (FoS) consists of interoperable equipment to capture and transfer near-real-time ground-based, tactical day/night/reduced visibility, imagery, video, and electronic proximity and movement sensing, all capable of dissemination through SOF organic, global C4I, and commercial communications infrastructures.			3.117

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command		Date: May 2021		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / Intelligence Systems Development	Project (Number/Name) S400 / SO Intelligence Systems		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
<b>FY 2021 Plans:</b> Continue specialized device modifications, integration and operational testing and evaluation.				
<b>FY 2022 Plans:</b> Continues specialized device modifications for Unattended Ground and Maritime Sensors (UGS/UMS), integration with small satellite receiver payloads and operational testing and evaluation.				
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$1.983 million will support development efforts associated with a UGS receiver payload for small satellite integration and testing.				
<b>Title:</b> SOFPREP  <b>Description:</b> This program serves as the intelligence focal point for production of SOF enhanced GEOINT (maps, imagery, and terrain data) and three dimensional (3D) scene visualization databases. SOFPREP gathers, processes, exploits, disseminates, and manages classified high resolution 3D databases and GEOINT data in support of SOF training, mission rehearsal, and execution preparation systems. The program builds the SOF common geospatial environment and manages the authoritative database of SOF-specific GEOINT terrain data. SOFPREP is a National Geospatial-Intelligence Agency (NGA) certified co-producer in support of time-sensitive SOF specific requirements.		0.280	0.287	0.281
<b>FY 2021 Plans:</b> Continue testing and evaluation of operational prototype systems and Artificial Intelligence/Machine Learning (AI/ML) tools to speed production of correlated high resolution 3D geospatial databases.				
<b>FY 2022 Plans:</b> Continues testing and evaluation of operational prototype systems and AI/ML tools to speed production of correlated high resolution 3D geospatial databases.				
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.006 million is due to funding made available to support higher Command priorities in the year of execution.				
<b>Title:</b> ISP  <b>Description:</b> This program collects and produces current, detailed, tactical planning data to support military operations to counter threats against U.S. citizens, interests, and property located both domestically and overseas. ISP products are specifically tailored packages that provide operational information, as well as intelligence data for use by DOD and the U.S. Department of State to support operational planners for counter-terrorism operations, evacuations, and other rescue missions.		0.415	0.803	0.797

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160405BB / <i>Intelligence Systems Development</i>	<b>Project (Number/Name)</b> S400 / <i>SO Intelligence Systems</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
<p><b>FY 2021 Plans:</b> Continue development and rapid fielding of ISP system and products to integrate with enterprise architecture and support the latest standards and technology.</p> <p><b>FY 2022 Plans:</b> Continues development and rapid fielding of ISP system and products to integrate with enterprise architecture and support the latest standards and technology.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.006 million is due to funding made available to support emerging critical Command requirements in the year of execution.</p>			
<p><b>Title:</b> SSE</p> <p><b>Description:</b> This program uses rapid test and evaluation of emerging Biometric and Forensic technology to provide state-of-the-art capabilities to the warfighter for the exploitation of documents, electronic data, materiel, and forensic evidence on sensitive sites/objectives. Biometric kits collect and transmit unique, measurable biometric signatures from personnel, including live/latent fingerprints, iris patterns, and facial features. It also provides a means to verify against and enroll subjects into the DOD authoritative database, and to query that database to support hold or release decisions. Forensic kits enable on-objective linking of events to specific persons through chemical analysis, latent fingerprints, cell phones and computer data analysis, and deoxyribonucleic acid collection. Exploitation Analysis Centers provide theater-level mobile forensic capabilities for more in-depth exploitation of collected exploitable material.</p> <p><b>FY 2021 Plans:</b> Identify and acquire next generation equipment with a focus on touchless/cableless systems to extract and exploit data resident on digital media. Explore emerging capabilities to collect and process DNA samples from live and latent sources under ambient conditions. Continue technical evaluation of new technologies with an increase of test events.</p> <p><b>FY 2022 Plans:</b> Continues development of software applications to enable biometric signature collection, increased volumes of collectible exploitable material (CEM) to include documents, cell phones, and electronic media, and to counter advancements in encryption and countermeasures which makes access to collectible material more difficult. Continues new touchless development of hardware and software applications to collect biometric signatures and CEM on small mobile computer devices (tablets, smart phones, etc.) and to rapidly advise SOF Operators of matches to authoritative biometric databases and relevancy of CEM in order to facilitate subsequent operations and answer priority intelligence requirements.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b></p>		0.155	0.614
			1.752

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7		<b>R-1 Program Element (Number/Name)</b> PE 1160405BB / <i>Intelligence Systems Development</i>		<b>Project (Number/Name)</b> S400 / <i>SO Intelligence Systems</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Increase of \$1.138 million will support development efforts for forensic and rapid Deoxyribonucleic acid (DNA) exploitation capability and testing.					
<b>Title:</b> SOF Signals Intelligence (SIGINT) Silent Dagger (SDAG)  <b>Description:</b> SOF Signals Intelligence (SIGINT) Processing, Exploitation, Dissemination PED (SDAG) is family of products and services providing Intelligence, Surveillance, and Reconnaissance (ISR), and analytical capabilities at the Joint Task Force level and below through a combination of reach-back, forward support and collaboration. The Program supports all Components and TSOCs with capability that interconnects Warfighters, Sensors, and Analytic Tools to “Find and Fix” Enemy Combatants and/or Terrorists as well as information sharing across the SOCOM Enterprise and DOD. SIGINT PED provides SIGINT exploitation capability in both garrison and deployed environments. These capabilities will be pursued via rapid fielding techniques when appropriate.  <b>FY 2022 Plans:</b> Continues technology development, and integration of emerging technologies and capabilities enhancements for requirements including but not limited to: Advanced analytics, User Interfaces (UI), cloud computing, machine learning, and disconnected operations. Continues limited Objective Events and exercise participation to test integration of emerging technologies and obtain user feedback of items in development.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.565 million is due to a transfer of SDAG funding from PE 0305208BB/Distributed Common Ground/Surface Systems.			-	-	0.565
<b>Title:</b> Classified Sub-Project  <b>Description:</b> Classified Sub-Project (provided under separate cover).  <b>FY 2022 Plans:</b> Details provided under separate cover.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$2.481 million will be provided under separate cover.			0.000	-	2.481
<b>Accomplishments/Planned Programs Subtotals</b>			15.349	19.519	32.766
			<b>FY 2020</b>	<b>FY 2021</b>	
<b>Congressional Add:</b> SSE - DOMEX Program			-	7.000	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160405BB / <i>Intelligence Systems Development</i>	<b>Project (Number/Name)</b> S400 / <i>SO Intelligence Systems</i>	

	<b>FY 2020</b>	<b>FY 2021</b>
<b><i>FY 2021 Plans:</i></b> Identify and acquire next generation equipment with a focus on touchless/cableless systems to extract and exploit data resident on digital media. Explore emerging capabilities to collect and process DNA samples from live and latent sources under ambient conditions. Continue technical evaluation of new technologies with an increase of test events.		
<b>Congressional Adds Subtotals</b>	-	7.000

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/020400INTL: <i>Intelligence Systems</i>	118.341	111.216	131.889	-	131.889	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

- NSSS introduces and integrates national systems capabilities into the SOF force structure and operations. This is accomplished by partnering with existing Intelligent Community and SOCOM programs of record to incorporate SOF mission requirements into current and developing technologies and assets. This leveraging of funds increases national and commercial systems awareness, demonstrates the tactical utility of national systems and commercial data, test technologies and evaluates operational concepts in biennial Joint Staff Special Projects, and allows for the transition of promising concepts and technologies to other SOF program offices for execution.
- JTWS is a SoS leveraging Commercial Off The Shelf (COTS)/Government Off The Shelf (GOTS) systems, as well as partnerships with other government agencies. The Program of Record (POR) will leverage capabilities requiring minimal modifications wherever possible. JTWS is making deliberate investments to evolve the program into modular/scalable systems with a framework supporting open architecture, software database and cyber hardened solutions. JTWS will address the continuously evolving Great Power Competition environments on the Ground, Air, Maritime, Unmanned Aerial System variants, leverage existing partnerships with other government agencies in order to integrate and sustain next generation need, from the Joint Components and as emerging threats require technology modernizations. The contracting strategy is a mixture of full and open competition for prime integrators, broad area announcements, and existing Indefinite Delivery/Indefinite Quantity (IDIQ) contracts.
- HF-TTL utilizes an evolutionary acquisition strategy to provide highly sophisticated TTL and close target audio/video devices capable of operating in various environments as needed to meet SOF operational requirements. Commercial and government agency sources will be leveraged for required certifications, device level modifications, integration, functional, and operational testing and evaluations.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160405BB / <i>Intelligence Systems Development</i>	<b>Project (Number/Name)</b> S400 / <i>SO Intelligence Systems</i>
<ul style="list-style-type: none"> <li>• TVS/RSTA employs an evolutionary strategy to incorporate the latest state of technology within its product line to provide upgraded next-generation technology insertion of COTS systems and address the changing threat environment to meet SOF reconnaissance and surveillance mission requirements. Commercial and government agency sources will be leveraged for required certifications, system level integration, functional, and operational testing and evaluations.</li> <li>• SOFPREP uses a rapid acquisition strategy to facilitate rapid and iterative delivery of digital products to meet emerging SOF requirements. Commercial, open and government sources are leveraged for required certifications, system level integration, functional, and operational testing and evaluations.</li> <li>• ISP uses a rapid acquisition strategy to facilitate rapid and iterative delivery of digital products to meet emerging SOF requirements. Commercial, open and government sources are leveraged for required certifications, system level integration, functional, and operational testing and evaluations.</li> <li>• SSE uses a rapid acquisition strategy to provide next-generation technologies for collection, processing, exploitation and dissemination capabilities supporting SOF exploitation mission requirements. Commercial and government agency sources are leveraged for required certifications, system level integration, functional, and operational testing and evaluations.</li> <li>• SDAG is a system of systems leveraging National services, controlled commercial hardware, and SOF specific capabilities, acquired through contracts and partnerships with Other Government Agencies (OGA). The Program represents SOF equities to OGAs, programs, and National capabilities sponsors to innovate capability for SOF SIGINT PED. The acquisition strategy is a mixture of agency partnerships and government capability providers leveraging open competition with controlled supply chains.</li> </ul>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160405BB / Intelligence Systems Development				Project (Number/Name) S400 / SO Intelligence Systems					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
National Systems Support to SOF (NSSS)	MIPR	Various : Various	55.260	0.862	Feb 2020	0.879	Feb 2021	5.712	Feb 2022	-		5.712	Continuing	Continuing	-
Joint Threat Warning System (JTWS) - All Variants (Air, Ground, Maritime, and Unmanned)	MIPR	Various : Various	111.003	7.485	Jan 2020	8.762	Feb 2021	9.798	Feb 2022	-		9.798	Continuing	Continuing	-
Hostile Forces-Tagging Tracking, and Locating (HF-TTL)	C/CPFF	Various : Various	4.884	0.854	Feb 2020	1.152	Feb 2021	4.759	Mar 2022	-		4.759	Continuing	Continuing	-
Tactical Video System/ Reconnaissance, Surveillance, & Target Acquisition (TVS/RSTA)	MIPR	Various : Various	0.957	0.402	Jul 2020	0.851	Jan 2021	1.839	Mar 2022	-		1.839	Continuing	Continuing	-
Integrated Survey Program (ISP) - Development, Test and Evaluation	C/FFP	Various : Various	2.320	0.415	Jan 2020	0.803	Jan 2021	0.797	Jan 2022	-		0.797	Continuing	Continuing	-
Sensitive Site Exploitation-Development (Cong Add)	Various	Various : Various	-	-		4.200	May 2021	-		-		-	Continuing	Continuing	-
Independent Verification and Validation - SOF Signals Intelligence Processing Exploitation, and Dissemination (SOF SIGINT PED)	MIPR	Various : Various	-	-		-		0.565	Apr 2022	-		0.565	Continuing	Continuing	-
Classified Sub-Project	C/TBD	TBD : TBD	-	-		-		2.481		-		2.481	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	164.397	-		-		-		-		-	0.000	164.397	-
Subtotal			338.821	10.018		16.647		25.951		-		25.951	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160405BB / Intelligence Systems Development				Project (Number/Name) S400 / SO Intelligence Systems					
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTWS Chamber Access/ SOI Emitters	MIPR	Various : Various	56.018	4.105	Jun 2020	4.800	May 2021	0.800	May 2022	-		0.800	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	116.844	-		-		-		-		-	0.000	116.844	-
Subtotal			172.862	4.105		4.800		0.800		-		0.800	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTWS Integration/Test/ Test Support	Various	Various : Various	21.799	0.300	May 2020	0.800	Nov 2020	1.063	Nov 2021	-		1.063	Continuing	Continuing	-
HF-TTL	MIPR	ATEC : FT Huachuca, AZ	1.520	0.224	May 2020	0.288	May 2021	1.641	May 2022	-		1.641	Continuing	Continuing	-
TVS/RSTA - User Assessments	MIPR	ATEC : FT Huachuca, AZ	6.719	0.267	Nov 2020	0.283	Jan 2021	1.278	Mar 2022	-		1.278	Continuing	Continuing	-
SOFPREP - Prototype Systems	C/FFP	Various : Various	1.022	0.280	Mar 2020	0.287	Mar 2021	0.281	Mar 2022	-		0.281	Continuing	Continuing	-
Sensitive Site Exploitation	MIPR	Various : Various	6.654	0.155	Feb 2020	0.614	May 2021	1.752	Jan 2022	-		1.752	Continuing	Continuing	-
Sensitive Site Exploitation (Cong Add)	Various	Various : Various	-	-		2.800	May 2021	-		-		-	0.000	2.800	-
Prior Year Funding - Completed Efforts	Various	Various : Various	53.928	-		-		-		-		-	0.000	53.928	-
Subtotal			91.642	1.226		5.072		6.015		-		6.015	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			603.325	15.349		26.519		32.766		-		32.766	Continuing	Continuing	N/A
Remarks															



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**Exhibit R-4, RDT&E Schedule Profile:** PB 2022 United States Special Operations Command

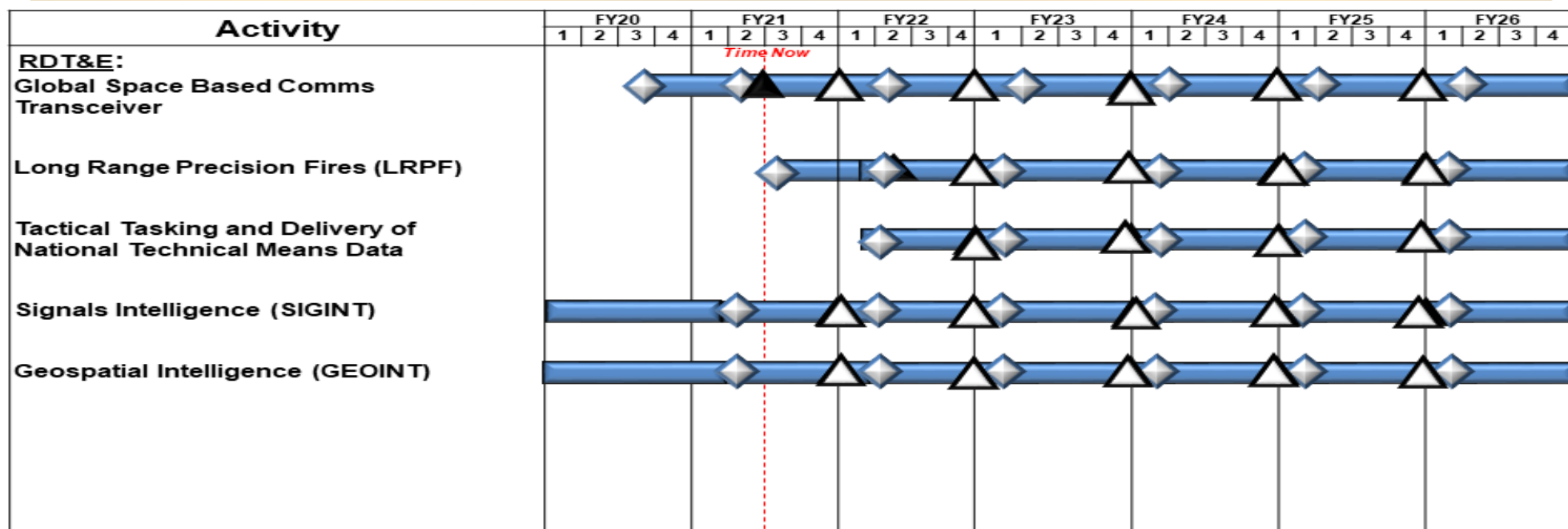
**Date:** May 2021

**Appropriation/Budget Activity**  
0400 / 7

**R-1 Program Element (Number/Name)**  
PE 1160405BB / Intelligence Systems Development

**Project (Number/Name)**  
S400 / SO Intelligence Systems

## National System Support To SOF (NSSS) / Tactical Exploitation of National System Capabilities (TENCAP) Schedule



Milestone  
 Contract Award  
 Article Delivery  
 RDT&E  
 Procurement  
 O&M  
 Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

Appropriation/Budget Activity

0400 / 7

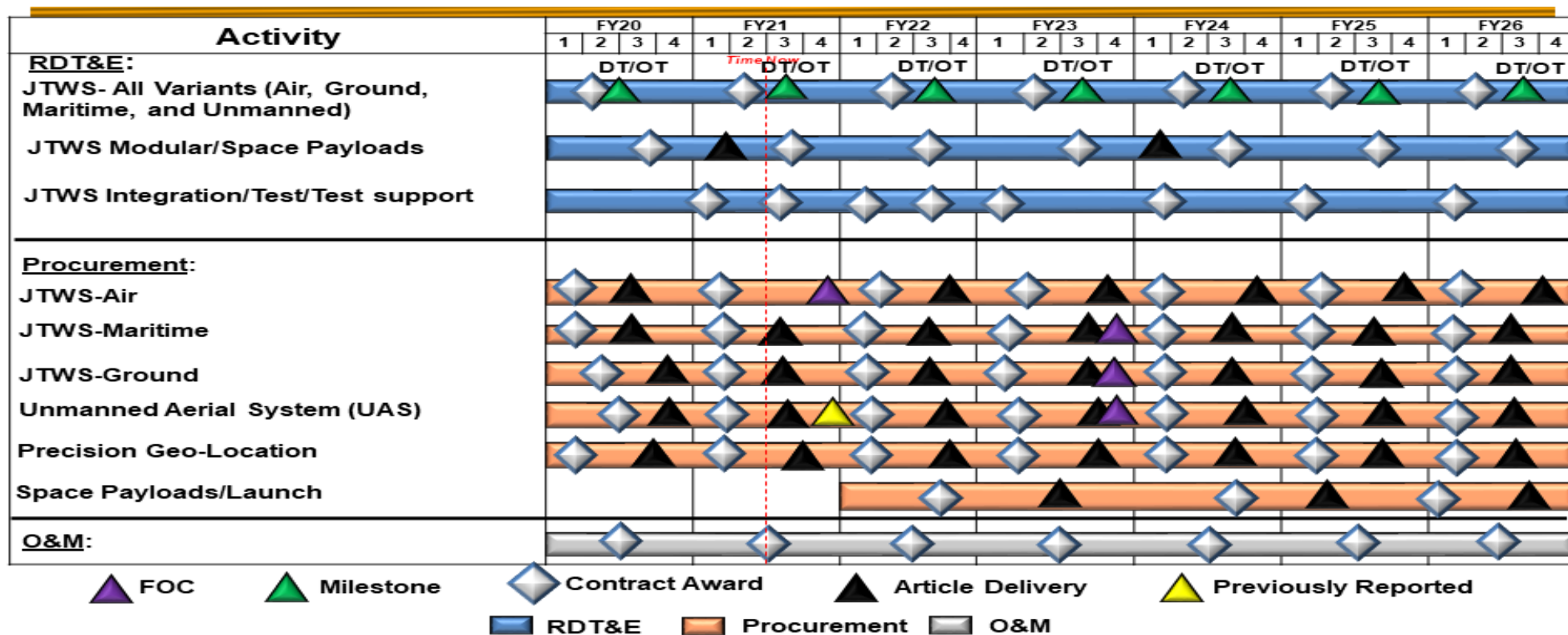
R-1 Program Element (Number/Name)

PE 1160405BB / Intelligence Systems Development

Project (Number/Name)

S400 / SO Intelligence Systems

## Joint Threat Warning System (JTWS) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

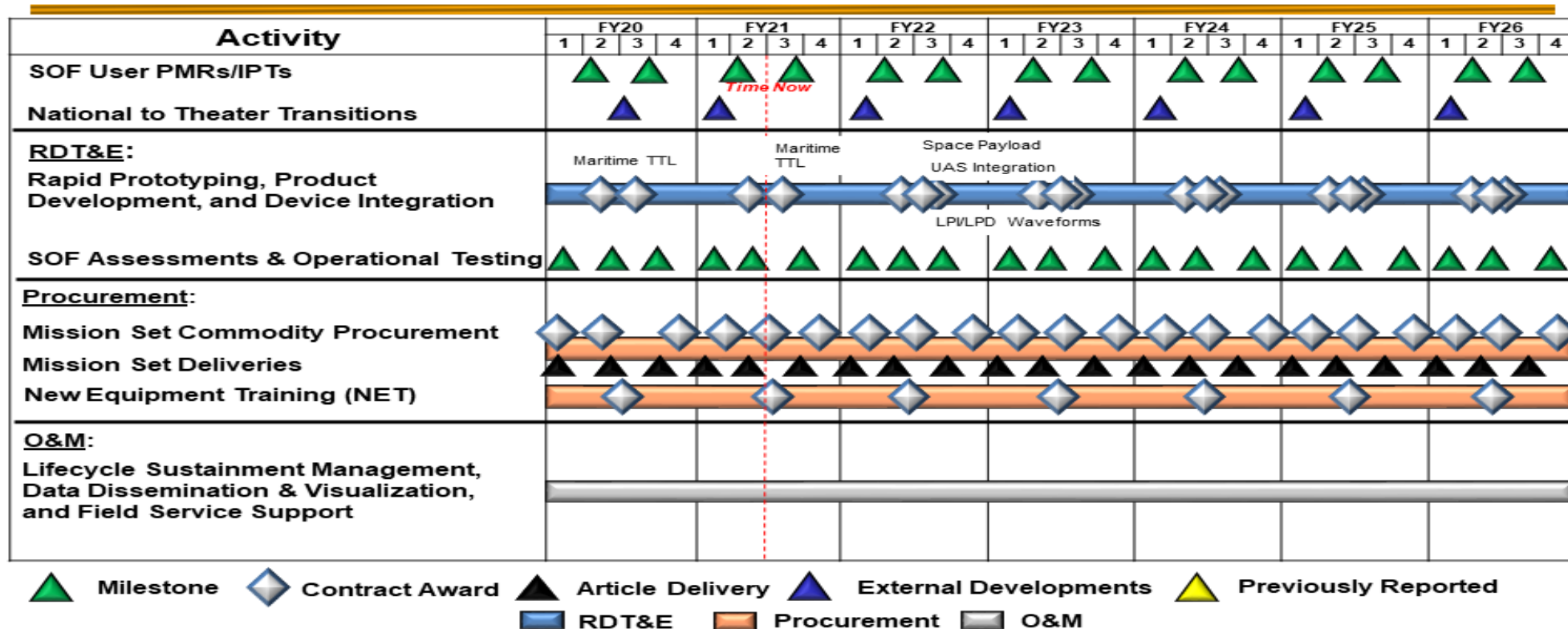
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160405BB / Intelligence Systems Development

Project (Number/Name)  
S400 / SO Intelligence Systems

# Hostile Forces-Tagging Tracking Locating Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

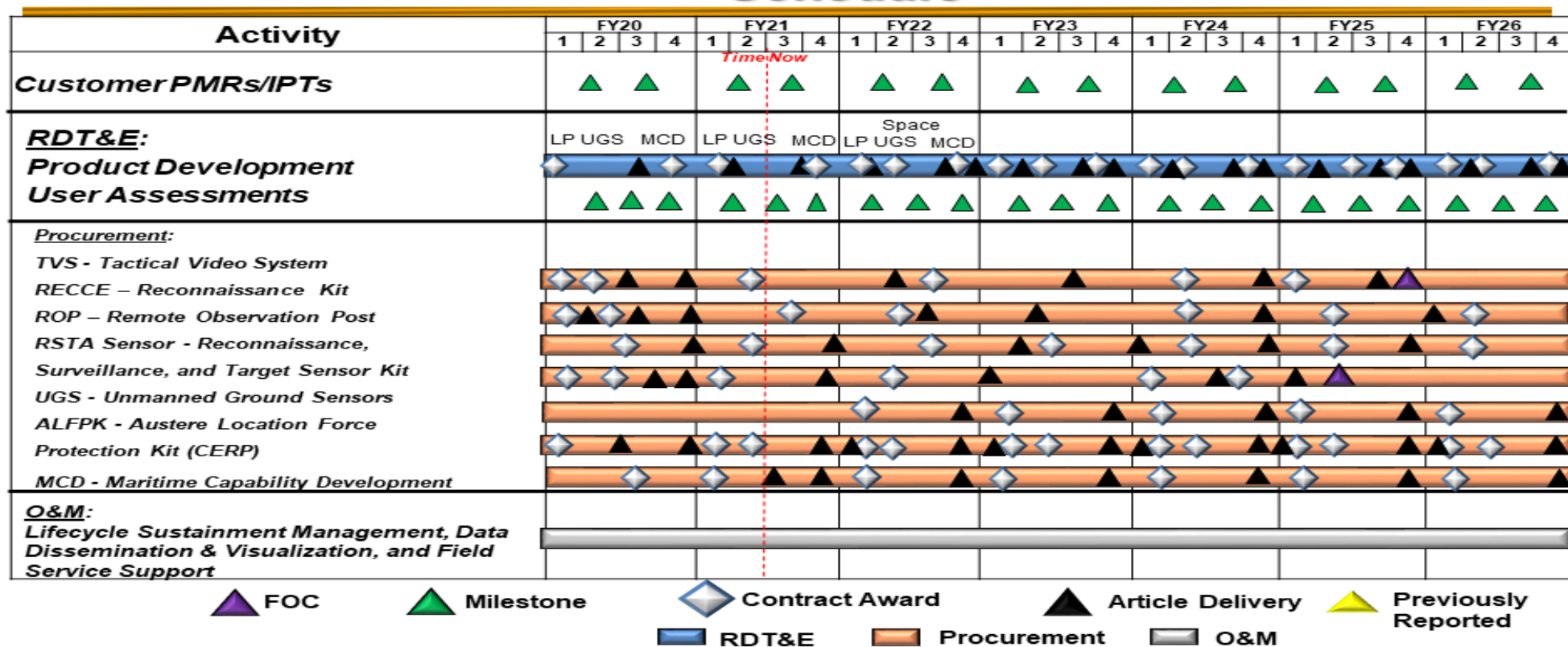
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160405BB / Intelligence Systems Development

Project (Number/Name)  
S400 / SO Intelligence Systems

## Special Operations Tactical Video System / Reconnaissance, Surveillance, and Target (TVS/STA) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

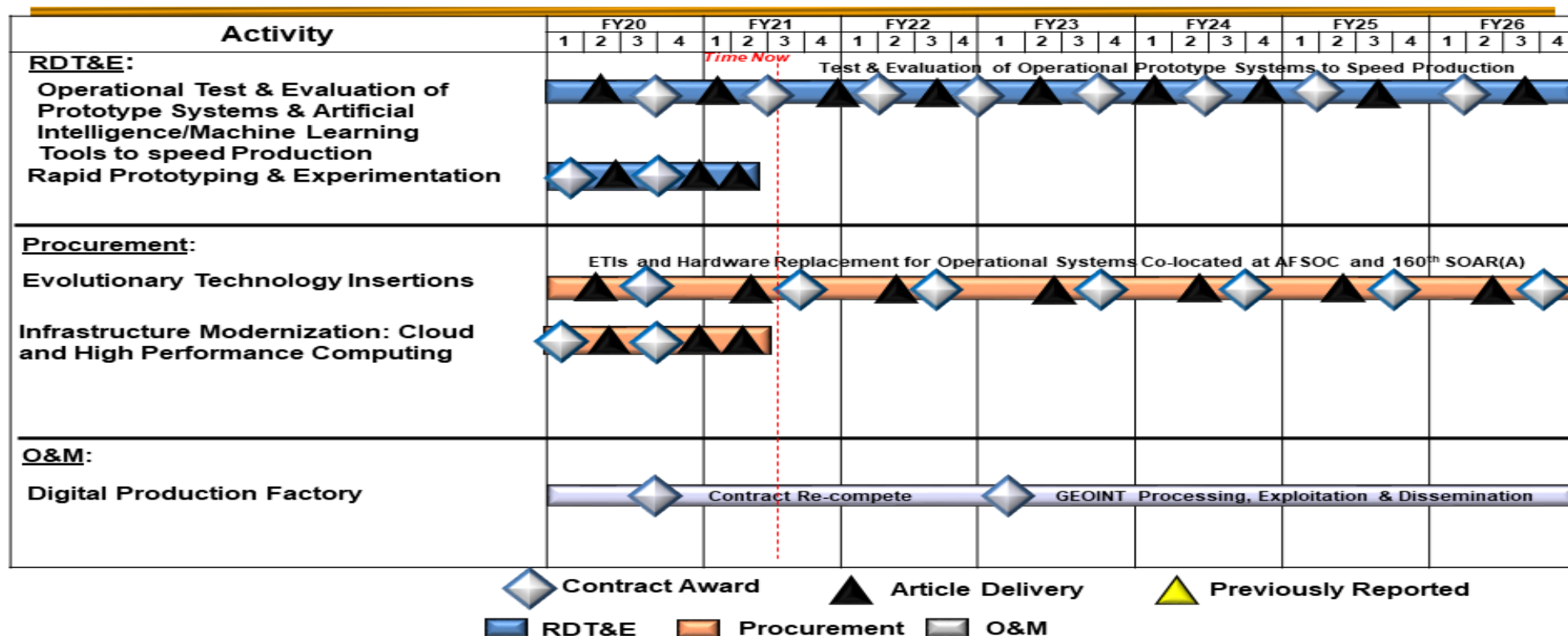
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160405BB / Intelligence Systems Development

Project (Number/Name)  
S400 / SO Intelligence Systems

# SOF Planning, Rehearsal and Execution Preparation (SOFPREP) Schedule



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**Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command**

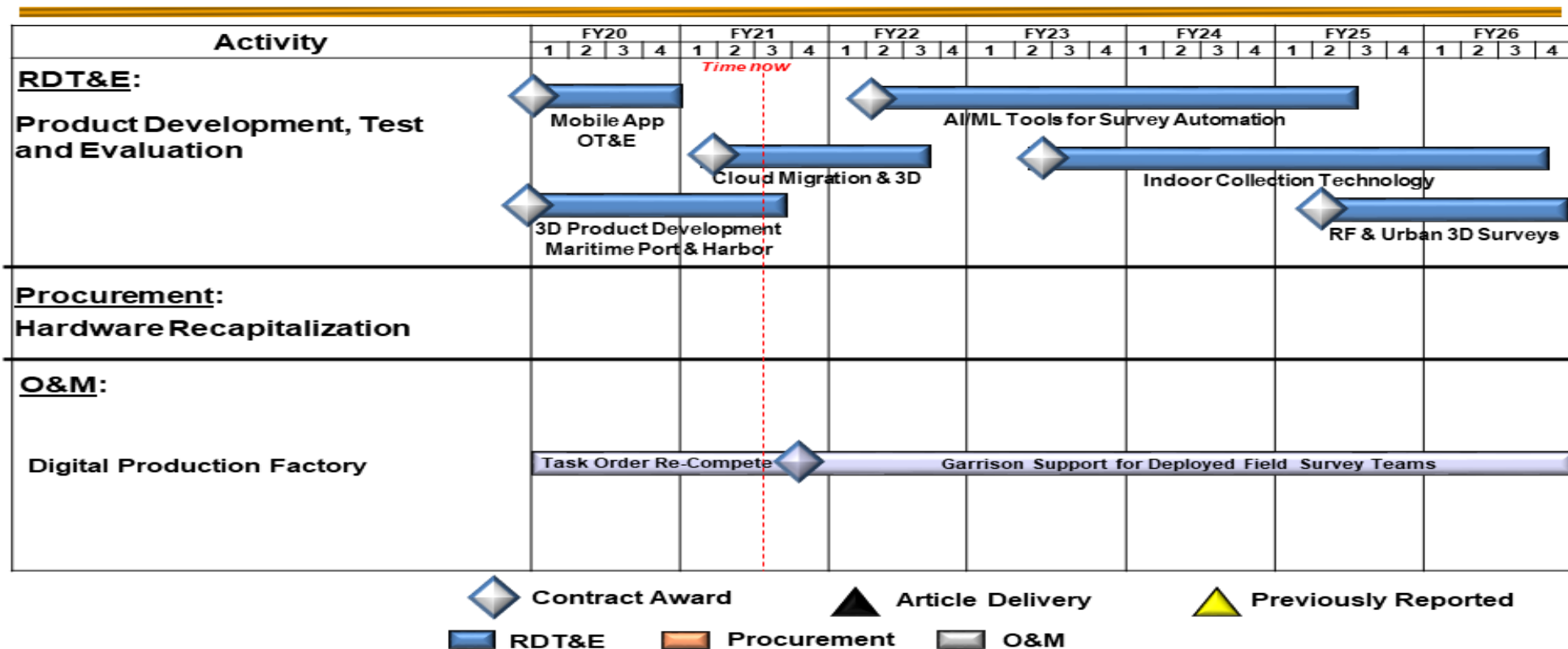
Date: May 2021

**Appropriation/Budget Activity**  
0400 / 7

**R-1 Program Element (Number/Name)**  
PE 1160405BB / *Intelligence Systems Development*

**Project (Number/Name)**  
S400 / SO Intelligence Systems

## Integrated Survey Program (ISP)





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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

Appropriation/Budget Activity

0400 / 7

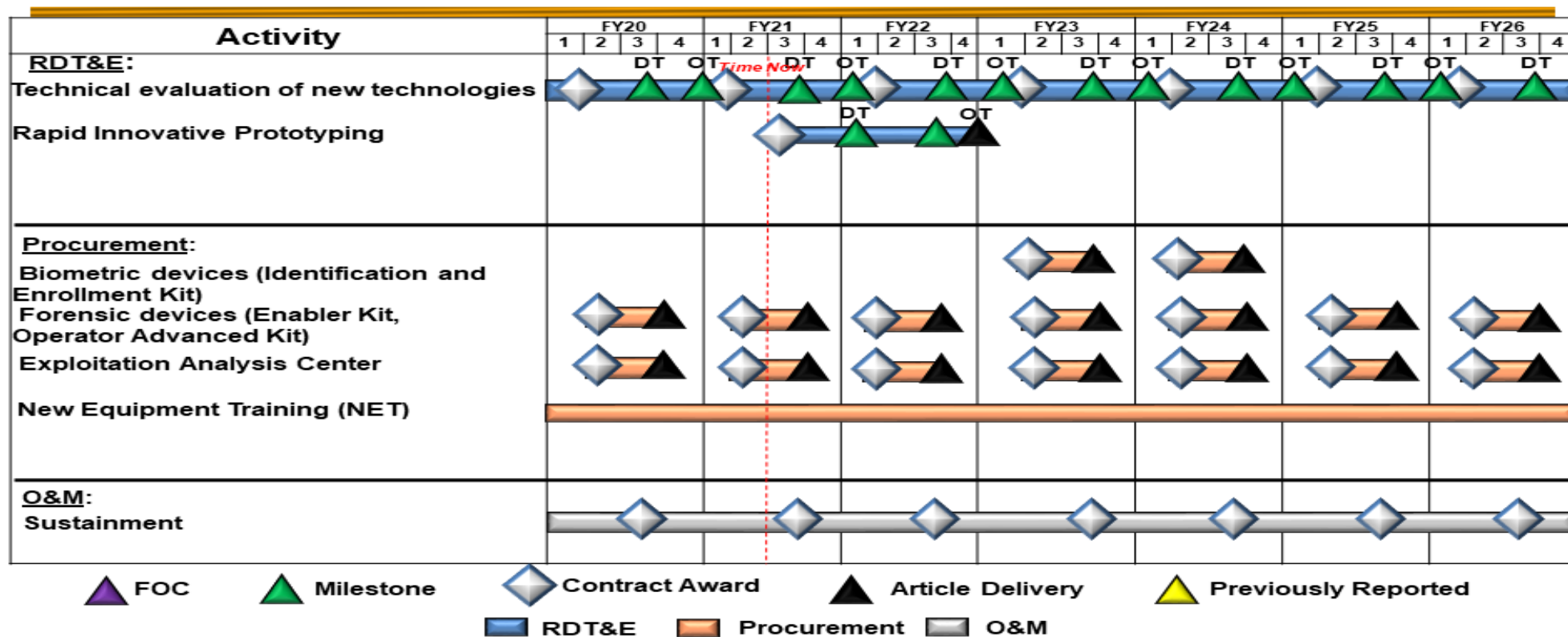
R-1 Program Element (Number/Name)

PE 1160405BB / Intelligence Systems Development

Project (Number/Name)

S400 / SO Intelligence Systems

# Sensitive Site Exploitation (SSE) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

Appropriation/Budget Activity

0400 / 7

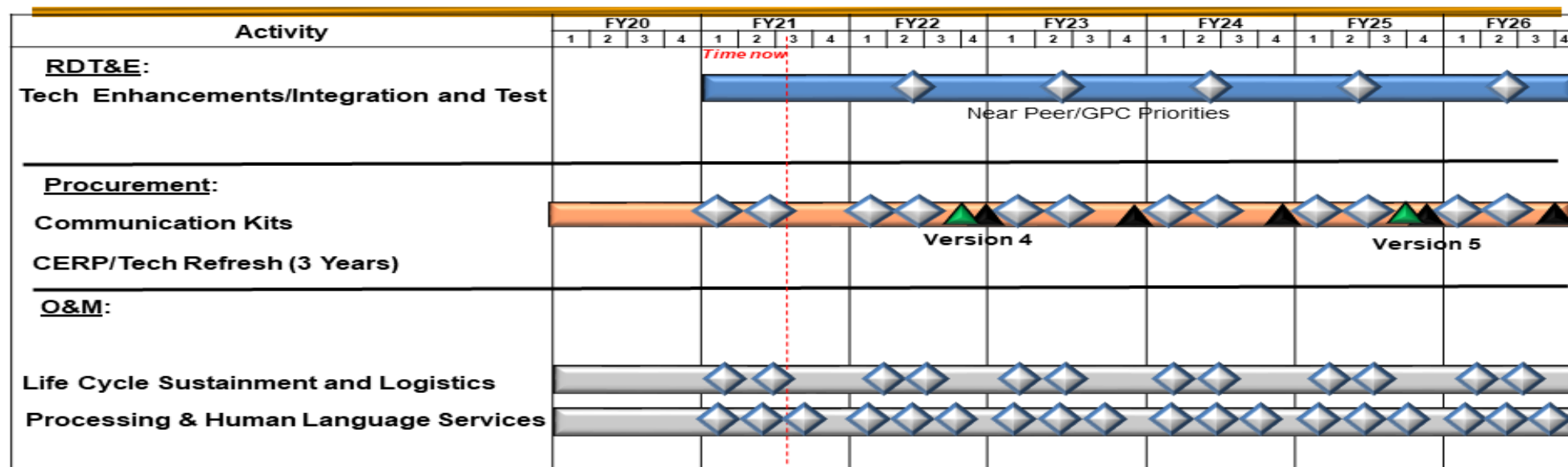
R-1 Program Element (Number/Name)

PE 1160405BB / Intelligence Systems Development

Project (Number/Name)

S400 / SO Intelligence Systems

# SOF Signals Intelligence (SIGINT) Silent Dagger (SDAG) Schedule



Note: For FY 2021 and prior, funding was displayed under schedule titled SIGINT PED in PE 0305208BB, Project S400A. Beginning FY 2022, funding is contained in PE 1160405BB Project S400 under schedule titled SDAG.

Note: Exercise & Limited Objective Events are depicted on ENT/ASIF and SGIP schedules.





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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160405BB / <i>Intelligence Systems Development</i>	<b>Project (Number/Name)</b> S400 / <i>SO Intelligence Systems</i>	

**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>National Systems Support to SOF (NSSS) Participation in Space Technology Development and Integration</i></b>				
Global Space Based Comms Transceiver	3	2020	4	2026
Long Range Precision Fires (LRPF)	3	2021	4	2026
Tactical Tasking and Delivery of National Technical Means Data	1	2022	4	2026
Signals Intelligence (SIGINT)	1	2020	4	2026
Geospatial Intelligence (GEOINT)	1	2020	4	2026
<b><i>Joint Threat Warning System (JTWS)</i></b>				
JTWS - All Variants (Air, Ground, Maritime, and Unmanned)	1	2020	4	2026
JTWS Modular/Space Payloads	1	2020	4	2026
JTWS Integration/Test/Test support	1	2020	4	2026
<b><i>Hostile Forces - Tagging, Tracking, and Locating (HF-TTL)</i></b>				
Rapid Prototyping, Product Development, and Device Integration	1	2020	4	2026
SOF Assessments and Operational Testing	1	2020	4	2026
<b><i>Special Operations Tactical Video System/Reconnaissance, Surveillance, and Target Acquisition (SOTVS/RSTA)</i></b>				
Product Development	1	2020	4	2026
User Assessments	1	2020	4	2026
<b><i>Special Operations Forces Planning, Rehearsal &amp; Execution Preparation (SOFPREP)</i></b>				
Operational Test and Evaluation of Prototype Systems to speed production	1	2020	4	2026
Rapid Prototyping and Product Development	1	2020	2	2021
<b><i>Integrated Survey Program (ISP)</i></b>				

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 United States Special Operations Command				Date: May 2021	
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160405BB / Intelligence Systems Development		Project (Number/Name) S400 / SO Intelligence Systems	
		Start		End	
Events by Sub Project		Quarter	Year	Quarter	Year
Product Development, Test and Evaluation		1	2020	4	2026
Sensitive Site Exploitation (SSE)					
Technical evaluation of new technologies		1	2020	4	2026
Rapid Innovative Prototyping		3	2021	4	2022
SOF Signals Intelligence (SIGINT) Silent Dagger (SDAG)					
Tech Enhancements & Integration		1	2021	4	2026

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 1160408BB <i>I Operational Enhancements</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	1,542.129	158.493	174.122	145.830	-	145.830	-	-	-	-	-	-
S500A: <i>Operational Enhancements</i>	1,542.129	158.493	174.122	145.830	-	145.830	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

Details are provided under separate cover.

This program requested \$120.563 million in Base Requirements and \$25.267 million for Enduring Costs Requirements.

<b><u>B. Program Change Summary (\$ in Millions)</u></b>	<b><u>FY 2020</u></b>	<b><u>FY 2021</u></b>	<b><u>FY 2022 Base</u></b>	<b><u>FY 2022 OCO</u></b>	<b><u>FY 2022 Total</u></b>
Previous President's Budget	160.648	137.227	137.609	-	137.609
Current President's Budget	158.493	174.122	145.830	-	145.830
Total Adjustments	-2.155	36.895	8.221	-	8.221
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-0.105			
• Congressional Rescissions	-	-			
• Congressional Adds	-	37.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-5.698	-			
• Realignment	3.543	-	-	-	-
• Other Adjustments	-	-	8.221	-	8.221

**Change Summary Explanation**

Funding:

FY2020: Net decrease of \$2.155 million is due to transfer of funds to Small Business Innovative Research (SBIR)/Small Business Technology Transfer (STTR) programs (-\$5.698 million) and details for an increase are provided under separate cover (\$3.543 million).

FY2021: Net increase of \$36.895 million details are provided under separate cover.

FY2022: Net increase of \$8.221 million details are provided under separate cover.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1160408BB I Operational Enhancements	
<p>The FY 2022 funding request was reduced by \$7.808 million to account for the availability of prior year execution balances. Additional details are provided under separate cover.</p> <p>FY 2022 Fiscal Balancing -\$1.504 million decrease is attributed to the reductions necessary to accommodate budget realities and directed strategy driven changes. Additional details are provided under separate cover.</p> <p>Schedule: None.</p> <p>Technical: None.</p>		

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	290.037	76.628	64.095	78.592	-	78.592	-	-	-	-	-	-
D476: <i>Military Information Support Operations</i>	49.647	5.565	4.261	3.168	-	3.168	-	-	-	-	-	-
S375: <i>Weapons Systems</i>	6.041	1.509	1.604	1.514	-	1.514	-	-	-	-	-	-
S385: <i>Soldier Protection and Survival Systems</i>	31.107	13.465	10.612	14.625	-	14.625	-	-	-	-	-	-
S385A: <i>Body Armor and Associated Equipment</i>	8.443	1.717	1.738	1.684	-	1.684	-	-	-	-	-	-
S395: <i>Visual Augmentation, Lasers and Sensor Systems</i>	15.096	3.168	2.171	5.047	-	5.047	-	-	-	-	-	-
S700: <i>Communications Equipment and Electronics Systems</i>	44.234	16.738	26.431	21.456	-	21.456	-	-	-	-	-	-
S710: <i>Tactical Systems Development</i>	7.238	2.710	3.344	6.331	-	6.331	-	-	-	-	-	-
S725: <i>Tactical Radio Systems</i>	32.835	10.627	7.940	2.999	-	2.999	-	-	-	-	-	-
S800: <i>Munitions Advanced Development</i>	95.396	21.129	5.994	21.768	-	21.768	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This Program Element (PE) provides for development, rapid prototyping, testing, and integration of specialized equipment in the areas of automation, communication, radio, weapon, soldier protection and survival, visual augmentation, lasers and sensors, munition and Military Information Support Operations (MISO) systems. Warrior Systems specialized equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. Special Operation Forces (SOF) must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success. The efforts within this PE improve SOF warfighting capabilities by continuing efforts to develop smaller, lighter, more efficient and more robust capabilities. The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability while, generally, being conducted in harsh environments for unspecified periods and in locations requiring small unit autonomy. Communications efforts will maintain a Command, Control, and Communications (C3) link between SOF Commanders and SOF Teams, and provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies and allied foreign forces. Efforts relating to soldier protection and

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	
<p>survival requirements will improve survivability and mobility of SOF while conducting varied missions. Counter Unmanned Aerial Systems (C-UAS) efforts rely on cutting edge detection sensors, both passive and active, paired with kinetic and non-kinetic defeat systems to allow SOF Operators to conduct Special Forces missions in denied and hostile environments worldwide. Specialized visual augmentation, lasers and sensors will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. Munition efforts include advanced engineering operational system development and qualification efforts related to SOF-peculiar munitions and equipment. Maritime Precision Engagement Munition (MPE-M) and Ground Organic Precision Strike System (GOPSS) will develop a SOF organic strike mission package to surgically strike an agile and mobile enemy, protect own forces, and minimize collateral damage. Additionally, MISO efforts include planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups and individuals. These technologies will be pursued via rapid prototyping efforts when appropriate.</p> <p>FY 2020 funding totals include \$5.802 million appropriated for Overseas Contingency Operations. FY 2021 funding totals include \$5.796 million appropriated for Overseas Contingency Operations. FY 2022 funding totals include \$78.592 million Base with \$0.000 million Direct War and \$5.195 million for Enduring costs in the Base Budget.</p> <p>MISO: This project provides for the development, test and integration of MISO equipment. MISO are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups, and individuals. This project funds transformational systems and equipment to conduct the seven phase MISO process (planning, targeting audience analysis, series development, product development and design, approval, production/distribution/dissemination, and measures of effectiveness) in support of combatant commanders.</p> <p>Weapons Systems: This project provides for next generation system development and Pre-Planned Product Improvements (P3I), testing, and integration of specialized weapon systems and weapon accessories to meet the unique requirements of SOF. Efforts include muzzle brakes and suppressors, and P3I for assault, sniper, and crew served weapons leveraging the latest technological advances to achieve overmatch capability against emerging threats.</p> <p>Soldier Protection and Survival Systems: This project funds development, testing, integration, rapid prototyping and evaluation of specialized equipment to meet the unique soldier protection and survival requirements of SOF, to include, but not limited to, individual survival equipment, hearing protection, clothing systems, load bearing equipment, Counter Radio Controlled Improvised Explosive Device (RC-IED) systems, Counter Unmanned Systems (aerial, ground and maritime), and personnel safety equipment to improve the mobility of SOF, while conducting varied missions. These missions are generally conducted in harsh and hostile environments, for unspecified periods and in locations requiring small unit autonomy.</p> <p>Body Armor and Associated Equipment: This project provides specialized equipment with ballistic protection to meet the unique soldier protection and survival requirements of SOF. Specialized ballistic equipment improves survivability and load bearing equipment impacting the mobility of SOF while conducting varied missions. This project enhances the SOF Personal</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	
Equipment Advanced Requirements program by providing for the research, development, and testing of body armor plates, soft armor, helmets, eye protection, and other personal protective equipment to meet current ballistic threats that exist on the battlefield.		
Visual Augmentation, Lasers and Sensor Systems: This project provides for development, testing, and integration of specialized visual augmentation, laser and sensor systems equipment to meet the unique requirements of SOF and facilitate future Hyper-Enabled Operator capabilities. Programs in this area include binocular/monocular devices; next generation laser designation and geo-location systems; weapon aiming lasers, scopes and accessories; and training and simulation systems.		
Communications Equipment and Electronics Systems: This project provides for communication systems to meet emergent requirements to support SOF. SOF units require communications equipment that improves their warfighting capability without degrading their mobility. SOF Communications Equipment and Electronics is a continuing effort to develop smaller, lighter, more efficient and more robust SOF Command, Control, Communications, and Computer (C4) capabilities.		
Tactical Systems Development: This project provides for development, testing, and integration of specialized automation equipment to meet the unique requirements of SOF. Tactical systems provide forward deployed forces with advanced networking, automated data processing, storage, and display capabilities to support situational awareness, mission planning and execution, and Command and Control (C2) of forces. Digital Ecosystem provides SOF forces improved situational awareness of the battlespace by leveraging publicly available information.		
Tactical Radio Systems: This project is for the development of all SOF tactical radio programs. SOF units require radio communication equipment that improves their warfighting capability without degrading their mobility. United States Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Tactical Radio Systems continue to provide SOF with the required capabilities throughout the 21st century. SOF Tactical Radios provide the critical C3 link between SOF Commanders and SOF Teams involved in operational missions and training exercises. They also provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies, and allied/coalition forces. Tactical Radios rapidly and seamlessly establish and maintain mobile and fixed C2 communications between infiltrated/operational elements and higher echelon headquarters, allowing SOF to operate with any force combination in multiple environments.		
Munitions Advanced Development: This project provides for the advanced engineering, operational system development, and qualification efforts related to SOF-peculiar and Foreign/Non-standard munitions and equipment. Funding supports development of Insensitive Munitions (IM) technology and evaluation, in accordance with statutory requirement set forth in U.S. Code, Title 10, Chapter 141, Section 2389 (December 2001). Testing is in accordance with the USSOCOM IM Strategic Plan. Funding also supports efforts to develop and improve MPE-M, GOPSS, and Stand-Off Precision Guided Munitions (SOPGM), including the development and integration of various technologies to enhance/modernize the SOPGMs delivered on to SOF and non-SOF platforms. When appropriate, these technologies will be pursued via rapid prototyping to develop, demonstrate and evaluate residual operational capabilities.		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command				Date: May 2021	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
0400: Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development		PE 1160431BB I Warrior Systems			
B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	81.514	65.307	55.509	-	55.509
Current President's Budget	76.628	64.095	78.592	-	78.592
Total Adjustments	-4.886	-1.212	23.083	-	23.083
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-1.212			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-2.691	-			
• Other Adjustments	-2.195	-	19.820	-	19.820
• Digital Ecosystem	-	-	3.263	-	3.263
<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>				<b>FY 2020</b>	<b>FY 2021</b>
<b>Project:</b> D476: Military Information Support Operations					
Congressional Add: NGLS				3.868	-
Congressional Add Subtotals for Project: D476				3.868	-
<b>Project:</b> S800: Munitions Advanced Development					
Congressional Add: SOPGM				12.571	-
Congressional Add Subtotals for Project: S800				12.571	-
Congressional Add Totals for all Projects				16.439	-
<b>Change Summary Explanation</b>					
Funding:					
FY 2020: Net decrease of \$4.886 million is due to the transfer of funds to Small Business Innovative Research/Small Business Technology Research Transfer (SBIR/STTR) programs (\$2.691 million) and funding was made available to support emerging Command requirements in the year of execution (\$2.195 million).					
FY 2021: Net decrease of \$1.212 million is due to a Congressionally directed reduction in MMP (\$1.178 million) and a Defense-Wide Congressionally directed reduction in Media Production Center (\$0.034 million).					



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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	
<p>FY 2022: Net increase of \$23.083 million is due to an increase for MPE-M/GOPSS design configuration development, testing and evaluation, improvement, and subsequent Critical Design Review milestone activity (\$12.546 million), Digital Ecosystem (DE) expansion of data sources, analysis tool/application development, and managed attribution architecture development (\$3.263 million), initiating Visual Augmentation Systems (VAS) Joint Acquisition Task Force/Hyper Enabled Operator (JATF/HEO) transition of an integrated head-mounted sensor and AR display providing threat detection (\$2.912 million), continue SOPGM integration/development efforts (\$0.719 million), initiating on-operator power and data management efforts within the SOF Personal Equipment Advanced Requirements (SPEAR) program (\$1.670 million), Munitions Advanced Development new Maritime Disablement Operations (MDO) requirement and complimentary efforts (\$0.976 million), addressing Blue Force Tracking (BFT) capability enhancements outlined in the latest Capability Development Document version (\$0.500 million), and initiating Tactical Combat Casualty Care (TCCC) new USSOCOM Brain Health RDT&amp;E line. This new effort is in support of the blast overpressure event capture with longitudinal tracking of SOF end users' neurocognitive health to support treatment and recovery (\$0.497 million).</p> <p>Schedule: None.</p> <p>Technical: None.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) D476 / Military Information Support Operations			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
D476: Military Information Support Operations	49.647	5.565	4.261	3.168	-	3.168	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides for the development and acquisition of Military Information Support Operations (MISO) equipment. MISO are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups, and individuals. This project funds transformational systems and equipment to conduct MISO in support of combatant commanders.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Fly-Away Broadcast System (FABS)  <b>Description:</b> FABS is a transit case fly-away broadcast system that utilizes commercial & industry standard technology to disseminate approved messaging to target audiences via Frequency Modulation (FM), Shortwave (SW), cellular Short Message Service (SMS) and Television (TV) transmitter.  <b>FY 2021 Plans:</b> Continue testing and evaluation of new systems and components to enhance MISO broadcasts, to include development of Next Generation FABS (v4) to integrate key capabilities to enhance MISO Broadcasts for Next Generation Loud Speakers-Scatterable Media (NGLS-SM) and Software Defined Radio (SDR) implementation that improves efficiencies and reduces Size, Weight, and Power (SWAP). Begin implementation of Windows Tactical Assault Kit - Common Operating Picture (WINTAK/COP) enhancements.  <b>FY 2022 Plans:</b> Continues testing and evaluation of new systems and components to enhance MISO broadcasts, to include development of Next Generation FABS (v4) to integrate key capabilities to enhance MISO Broadcasts for NGLS-SM and SDR implementation that improves efficiencies and reduces SWAP. Completes development of WINTAK/COP enhancements.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.012 million is due to cost share efficiencies in WINTAK/COP development and testing.	0.897	0.708	0.696
<b>Title:</b> Next Generation Loud Speakers (NGLS)  <b>Description:</b> NGLS are portable systems capable of disseminating high quality recorded and live audio messages by MISO Forces in varied geographical area and climate conditions. NGLS consists of Dismounted and Mounted variants that are lighter,	0.800	0.879	0.885

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) D476 / Military Information Support Operations		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2020	FY 2021	FY 2022
smaller, and louder than legacy speaker systems, with added clarity and durability. NGLS-SM is a hand-emplaced or air-delivered printed audio-visual device for disseminating delayed or on-cue messages to foreign target audiences.					
FY 2021 Plans: Continue development and evaluation of new systems and components to enhance MISO broadcasts. Complete NGLS-SM Increment 1 and NGLS-Dismounted GEN 2 with wireless End User Device. Complete MOBY Configurable Mission Module. Begin NGLS-SM Increment 2 and development of Windows Tactical Assault Kit - Common Operating Picture (WINTAK/COP) enhancements. Begin evaluation of NGLS-Sonic Projection.					
FY 2022 Plans: Continues development and evaluation of new systems and components to enhance MISO broadcasts. Completes NGLS-D GEN 2 with wireless End User Device and NGLS-SM INC 2 and development of WINTAK/COP enhancements. Continues NGLS-Sonic Projection development.					
FY 2021 to FY 2022 Increase/Decrease Statement: Increase of \$0.006 million is due to development, test, and evaluation efforts for NGLS-SM.					
Title: Media Production Center (MPC)			-	2.674	1.587
Description: MPC is a set of independent but inter-related multi-media production, editing, and archiving capabilities providing MISO Forces and other select organizations with options for imagery, audio, animation, and Audio/Video (AV) products of varying degrees of technical complexity and operational responsiveness.					
FY 2021 Plans: Initiate development of software application technologies on existing and new systems.					
FY 2022 Plans: Completes development and begins test and evaluation of software application technologies on existing and new systems.					
FY 2021 to FY 2022 Increase/Decrease Statement: Decrease of \$1.087 million due to completion of initial core development.					
Accomplishments/Planned Programs Subtotals			1.697	4.261	3.168
			FY 2020	FY 2021	
Congressional Add: NGLS			3.868	-	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> D476 / <i>Military Information Support Operations</i>	

	<b>FY 2020</b>	<b>FY 2021</b>
<b>FY 2020 Accomplishments:</b> Congressional add continued development, test, and evaluation of distributable audio media and NGLS-SM.		
<b>Congressional Adds Subtotals</b>	3.868	-

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC1/0204OTHER: OTHER ITEMS <\$5M	103.059	82.691	62.722	-	62.722	-	-	-	-	-	-

**Remarks**

None.

**D. Acquisition Strategy**

- The FABS program has an evolutionary acquisition strategy. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- The NGLS program has an evolutionary acquisition strategy for the legacy NGLS Mounted and Dismounted and an incremental acquisition strategy for new developmental variants (NGLS-SM, NGLS-Sonic Projection). Commercial and government agencies will be leveraged for engineering, required certifications, functional and operating tests and acceptance support.
- The MPC program will pursue incremental development of advanced media and analytic software capabilities following commercial standards and best practices.

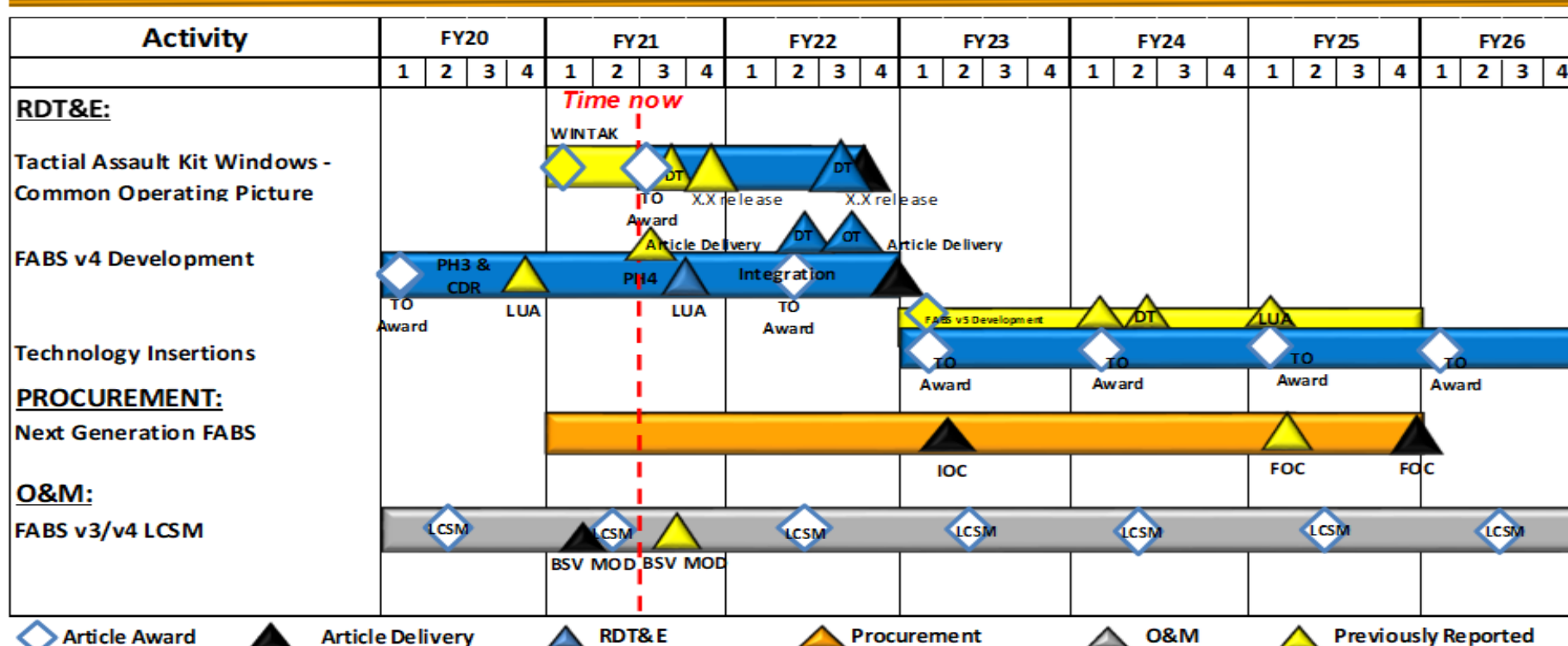
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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) D476 / Military Information Support Operations					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Fly Away Broadcast Systems (FABS)	MIPR	Various : Various	5.204	0.897	Oct 2019	0.708	Feb 2021	0.100	Jul 2022	-		0.100	Continuing	Continuing	-
Next Generation Loud Speakers (NGLS)	Various	Various : Various	1.164	-		0.879	Feb 2022	0.885	Jan 2022	-		0.885	Continuing	Continuing	-
NGLS Congressional Add	Various	Various : Various	11.541	3.868	Apr 2021	-		-		-		-	0.000	15.409	-
Media Production Center (MPC)	C/Various	Various : Various	-	-		2.674	Feb 2021	-		-		-	Continuing	Continuing	-
Prior Year	C/Various	Various : Various	30.929	-		-		-		-		-	0.000	30.929	-
Subtotal			48.838	4.765		4.261		0.985		-		0.985	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NGLS	Allot	Various : Various	0.100	0.800	Apr 2020	-		-		-		-	Continuing	Continuing	-
FABS	MIPR	Various : Various	-	-		-		0.596	Mar 2022	-		0.596	Continuing	Continuing	-
MPC	C/Various	Various : Various	-	-		-		1.587	Jan 2022	-		1.587	Continuing	Continuing	-
Prior Year	MIPR	Various : Various	0.709	-		-		-		-		-	0.000	0.709	-
Subtotal			0.809	0.800		-		2.183		-		2.183	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			49.647	5.565		4.261		3.168		-		3.168	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) D476 / Military Information Support Operations	

## Fly Away Broadcast System (FABS) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

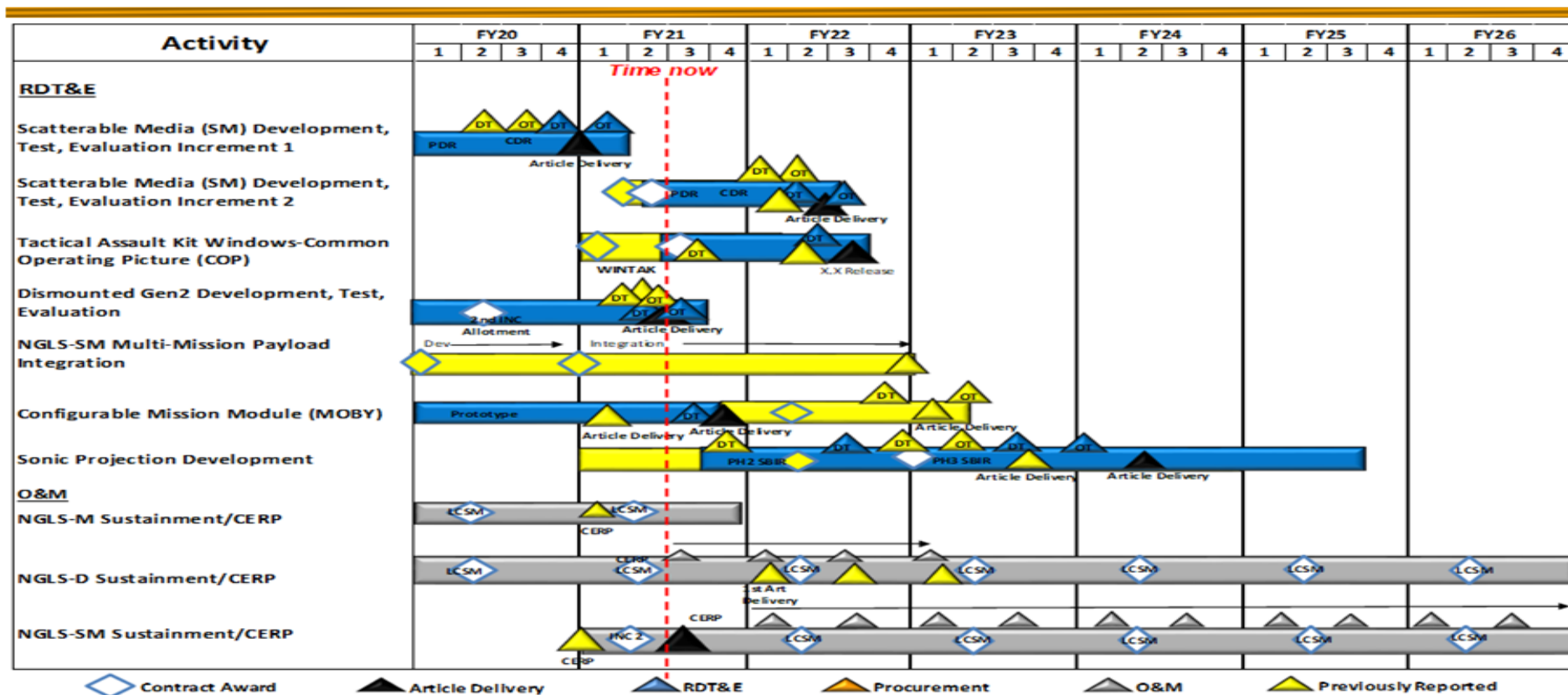
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
D476 / Military Information Support  
Operations

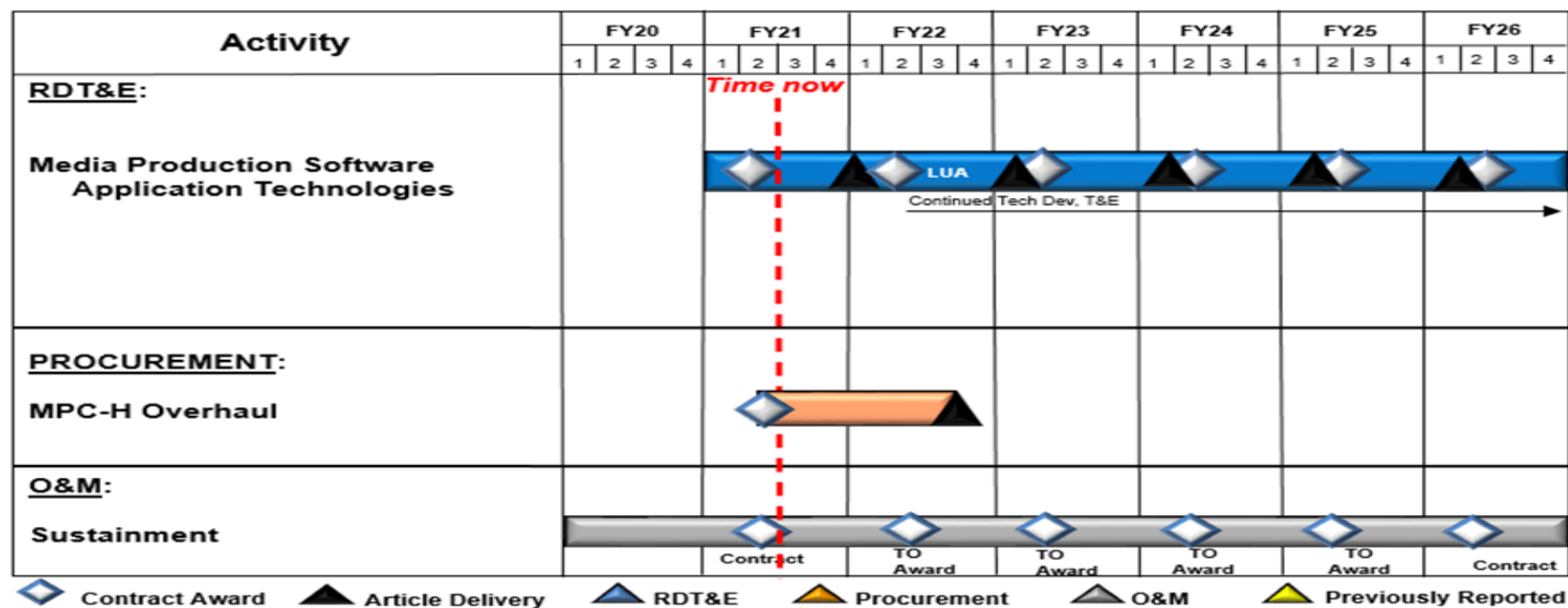
## Next Generation Loudspeaker System (NGLS) Schedule



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / Warrior Systems	<b>Project (Number/Name)</b> D476 / Military Information Support Operations	

## Media Production Center (MPC) Schedule





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Exhibit R-4A, RDT&E Schedule Details: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) D476 / Military Information Support Operations	

## Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Fly Away Broadcast Systems (FABS)</i></b>				
Tactical Assault Kit Windows - Common Operating Picture (COP)	3	2021	3	2022
FABS (V4) Development	1	2020	4	2022
Technology Insertions	1	2023	4	2026
<b><i>Next Generation Loudspeakers (NGLS)</i></b>				
Scatterable Media (SM) Development, Test, and Evaluation INC 1	1	2020	1	2021
SM Development, Test, and Evaluation INC 2	2	2021	3	2022
Tactical Assault Kit Windows - COP	2	2021	3	2022
Dismounted GEN 2 Development, Test, and Evaluation	1	2020	3	2021
Configurable Mission Module (MOBY)	1	2020	4	2021
Sonic Projection Development	3	2021	3	2025
<b><i>Media Production Center (MPC)</i></b>				
Media Production Software Technologies	1	2021	4	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command									Date: May 2021			
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S375 / Weapons Systems			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S375: Weapons Systems	6.041	1.509	1.604	1.514	-	1.514	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project provides for the next generation systems Pre-Planned Product Improvements (P3I), testing, and integration of specialized weapon systems and weapon accessories to meet the unique requirements of Special Operations Forces (SOF). The efforts include the product improvements and testing of the Suppressed Upper Receiver Group (SURG), Advanced Sniper Rifle (ASR), Machine Gun (MG) Barrel, Mid-Range Gas Gun (MRGG), Personal Defense Weapon (PDW), Hand Gun (HG) suppressor, Lightweight Machine Gun-Medium (LMG-M), and Advance Machine Gun (AMG). The product improvements will leverage the latest technological advances to achieve overmatch capability against current and emerging threats. These technologies will be pursued via rapid prototyping efforts when appropriate.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2020	FY 2021	FY 2022	
Title: Weapons									1.509	1.604	1.514	
Description: SOF weapons are developed to enable the operator to tailor the configuration of the weapon to the assigned mission and operational environment, enhancing the overall effectiveness of the weapons, which enables mission accomplishment and operator survivability. Weapons is designated a Middle Tier of Acquisitions (MTA) program which uses the rapid prototyping pathway and is executed using existing contracts, government agencies, and new contract competitively selected as appropriate.												
FY 2021 Plans: Continue development of enhanced capabilities to improve performance of individual sniper, rifle, and machine gun weapons.												
FY 2022 Plans: Continues development of enhanced capabilities to improve performance of individual sniper, rifle, and machine gun weapons to gain synergy on the Army's Next Generation efforts/gains.												
FY 2021 to FY 2022 Increase/Decrease Statement: Decrease of \$0.090 million is due to a reduction in testing and evaluation costs.												
Accomplishments/Planned Programs Subtotals									1.509	1.604	1.514	
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost	
• PROC/0204WARRIOR: Warrior Systems <\$5M	344.003	342.606	284.548	-	284.548	-	-	-	-	-	-	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command							<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7				<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>			<b>Project (Number/Name)</b> S375 / <i>Weapons Systems</i>		

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
<b>Remarks</b>											

**D. Acquisition Strategy**

Evolutionary acquisition, leveraging emerging technology and rapid prototyping efforts when appropriate. An evolutionary approach delivers capability in increments, recognizing, up front, the need for future capability improvements. Full and open competition with firm-fixed price contracts and other transaction authorities (OTAs).

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> S375 / <i>Weapons Systems</i>
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Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Weapon Test & Evaluation	MIPR	Various : Various	6.041	1.509	Jan 2020	1.604	Jan 2021	1.514	Jan 2022	-		1.514	Continuing	Continuing	-
<b>Subtotal</b>			6.041	1.509		1.604		1.514		-		1.514	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			6.041	1.509		1.604		1.514		-		1.514	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

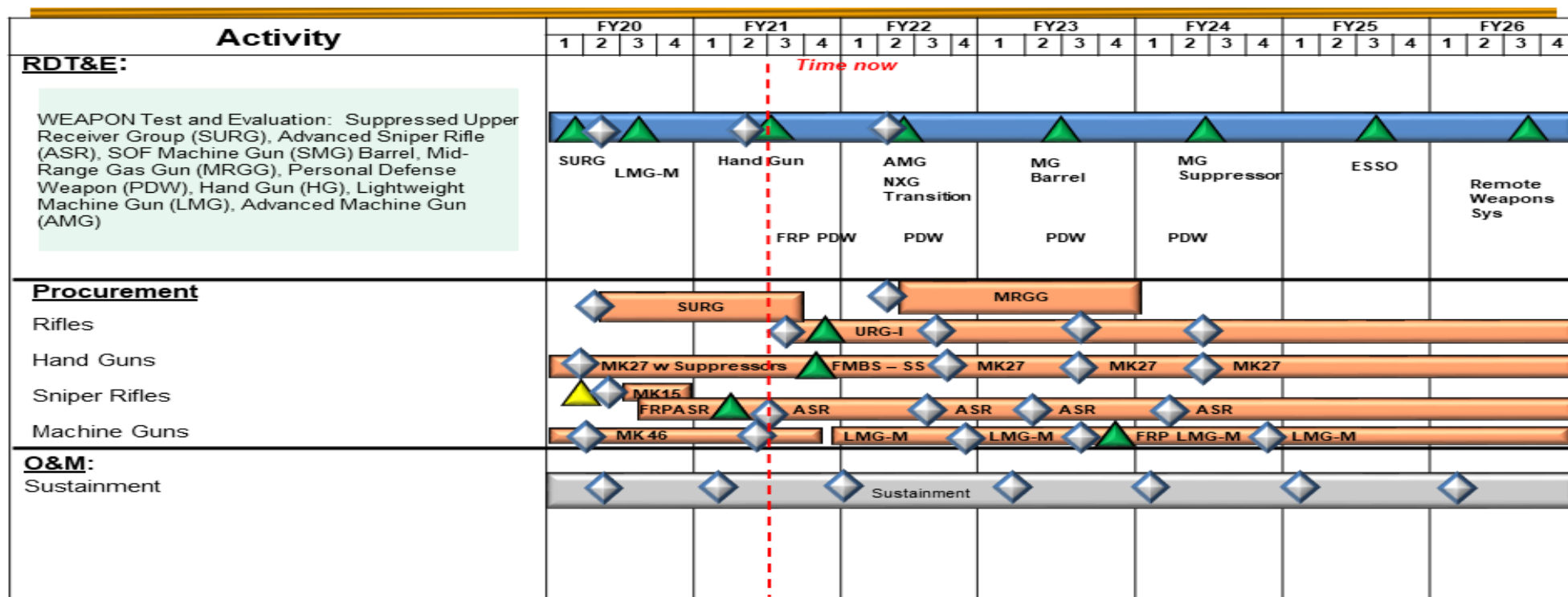
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S375 / Weapons Systems

# Weapon Systems Schedule



FOC 
 Milestone 
 Contract Award 
 Article Delivery 
 RDT&E 
 Procurement 
 O&M 
 Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S375 / Weapons Systems	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Weapon Systems</b>				
Test & Evaluation: Suppressed Upper Receiver Group, Advanced Sniper Rifle, SOF Machine Gun Barrel, Mid-Range Gas Gun, Personal Defense Weapon, Hand Gun, Lightweight Machine Gun, Advanced Machine Gun	1	2020	4	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S385 / Soldier Protection and Survival Systems			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S385: Soldier Protection and Survival Systems	31.107	13.465	10.612	14.625	-	14.625	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project funds development, testing, integration, rapid prototyping and evaluation of specialized equipment to meet the unique soldier protection and survival requirements of Special Operations Forces (SOF), to include, but not limited to, individual survival equipment, hearing protection, clothing systems, load bearing equipment, Counter Radio Controlled Improvised Explosive Device (RC-IED) systems, Counter Unmanned Systems (aerial, ground and maritime), and personnel safety equipment to improve the mobility of SOF, while conducting varied missions. These missions are generally conducted in harsh and hostile environments, for unspecified periods and in locations requiring small unit autonomy. These technologies will be pursued via rapid prototyping efforts when appropriate.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2020	FY 2021	FY 2022	
Title: SOF Personal Equipment Advanced Requirements (SPEAR)									0.256	1.232	2.980	
Description: The SPEAR program provides for the research, development, testing and evaluation of a variety of individual and survival equipment to include: ballistic and environmental protective combat uniforms, load carriage systems, communications headsets, and visual augmentation system mounts.												
FY 2021 Plans: Continue research and development of land communications materiel solutions and environmental protective combat uniforms. Continue materials testing and incorporation into commodity lines. Continue wireless headset evaluations. Continue interoperability of headsets with radios and integrated communication systems.												
FY 2022 Plans: Initiates Land Communications Headset recompile efforts. Continues environmental protective combat uniforms, materials testing, and incorporation into commodity lines, wireless headset evaluations, and begins power and data management efforts.												
FY 2021 to FY 2022 Increase/Decrease Statement: Increase of \$1.748 million initiates on-operator power and data management efforts within the SPEAR program.												
Title: Tactical Combat Casualty Care (TCCC)									0.232	0.229	0.706	
Description: TCCC provides lifesaving medical devices, ancillary equipment and Casualty Evacuation (CASEVAC) sets for SOF. The CASEVAC procures a suite of Food and Drug Administration (FDA) approved medical items including, but not limited to, intraosseous infusion devices, patient monitoring and assessment devices, emergency airway kits, as well as devices that provide SOF the capability to support extraction, mobility, transportation, and sustainment of casualties in forward areas. The TCCC												

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
program fields essential lifesaving CASEVAC equipment and capabilities and is a platform to transition capabilities developed under the National Mission Force's Tactical Medical Programs. This capability provides significant ability to lessen battlefield losses by providing timely, critical lifesaving and evacuation capabilities to the forward-deployed SOF operators.  <b>FY 2021 Plans:</b> Continue test support to include program management, market surveys, rapid prototyping, test article acquisition, test and evaluation and systems engineering in direct support of the CASEVAC program. Continue the evaluation of enhanced medical monitoring systems capable of enabling telemedicine/telementoring for incorporation into the CASEVAC program.  <b>FY 2022 Plans:</b> Continues the test support, market surveys, rapid prototyping, test article acquisition, test and evaluation and systems engineering in direct support of the CASEVAC program with continued focus on enabling telemedicine. The FY22 plan includes the initiation of the United States Special Operations Command (USSCOM) Brain Health Research, Development, Test, and Evaluation (RDT&E) line in support of the longitudinal tracking of SOF end users' neurocognitive health for treatment and recovery.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.477 million initiates the new USSOCOM Brain Health RDT&E line. This new effort is in support of the blast overpressure event capture with longitudinal tracking of SOF end users' neurocognitive health to support treatment and recovery.				
<b>Title:</b> Counter Radio Controlled-Improvised Explosive Device (RC-IED)  <b>Description:</b> USSOCOM uses ground (mounted/dismounted) based jammers to provide Electronic Counter Measures (ECM) capabilities to counter radio frequency (RF) controlled devices. This program provides scalable ECM systems whose configuration and modularity address a mission critical capability to counter this threat globally. To stay ahead of emerging threats, USSOCOM has historically developed advanced techniques on an annual basis. Through strategic partnerships with the Services, and other government agencies, USSOCOM vastly improved program affordability while maintaining Joint Force compatibility. USSOCOM's Countering Weapons of Mass Destruction (CWMD) special mission remains the top hardware and special application module upgrades, SOCOM is able to use its ECM for its top priority mission and continue to apply advanced techniques against emerging threats across the spectrum of warfare including great power competition. All Next Generation ECM is designed to support SOF missions in great power competition, while maintaining cost effective counter violent extremist organization (CVEO) capabilities.  <b>FY 2021 Plans:</b> Continue test support to the Counter RC-IED program. Continue system engineering, test and evaluation, test article acquisition, and market research of the ECM programs. Maintain range effectiveness and currency, ensuring the ability to accurately test against current and emerging threat systems from state and non-state actors. Continue development and testing of ECM		1.674	1.632	4.004



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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385 / Soldier Protection and Survival Systems		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
systems capability to include advanced software technique countermeasures and loadsets for mounted and dismounted systems. Continue implementation of Modi software refactoring, improving stability and future technology integration. <b>FY 2022 Plans:</b> Continues test support to the Counter RC-IED program. Continues system engineering, test and evaluation, test article acquisition, and market research of the ECM programs. Maintains range effectiveness and currency, ensuring the ability to accurately test against current and emerging threat systems from state and non-state actors. Continues development and testing of ECM systems capability to include advanced software technique countermeasures and loadsets for mounted and dismounted systems. Initiates Next Generation ECM development. <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$2.372 million is due to initiating Next Generation ECM hardware and software development.				
<b>Title:</b> Counter Unmanned Aerial System (C-UAS) <b>Description:</b> SOF C-UAS enhances the SOF operator’s ability to detect, identify, classify, locate, track, deter, defeat and exploit unmanned system threats. The funding in this program supports a Family of Systems (FoS) design, development, integration, prototyping and test of cutting edge technologies that deliver and integrate various capabilities including, but not limited to, interceptors, Radio Frequency (RF) detection and defeat, other passive detection, radar, and Electro-Optical and Infrared (EO/IR). <b>FY 2021 Plans:</b> Complete C-UAS Sensor Integration Module (SIM) FoS Middle Tier Acquisition rapid prototype and transitions to Army Rapid Capabilities and Critical Technologies Office (RCCTO) for continued development. Continue development and test of kinetic and non-kinetic capabilities of mounted, dismounted, and fixed-site expeditionary form factors to address emerging threats. <b>FY 2022 Plans:</b> Continues test and evaluation of sensor and effector capabilities of mounted, dismounted, and expeditionary fixed-site form factors to address emerging threats with a Systems Integration Partner (SIP). <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.601 million is due to streamlining contract support efforts and transition into a Systems Integration Partner (SIP).		9.671	5.796	5.195
<b>Title:</b> Personal Signature Management (PSM) <b>Description:</b> PSM provides for development, rapid prototyping, test, and evaluation of signature reducing materials and technology, in order to reduce the probability of detection by battlefield threat sensors. <b>FY 2021 Plans:</b>		1.632	1.723	1.740

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> <i>S385 / Soldier Protection and Survival Systems</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
<p>Continue research, development, rapid prototyping, test and evaluation of next generation signature reducing solutions. Provide for program management, market research, test item acquisition and test and evaluation, in support of PSM efforts for both land and maritime operations.</p> <p><b><i>FY 2022 Plans:</i></b> Continues research, development, rapid prototyping, test and evaluation of next generation signature reducing solutions. Provides for program management, market research, test item acquisition and test and evaluation, in support of PSM efforts for both land and maritime operations.</p> <p><b><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i></b> Increase of \$0.017 million is due to increase in charges and cost of threat sensor exploitation.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>		13.465	10.612
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
<p>SPEAR: Contracts in support of SPEAR are a combination of Firm Fixed Price (FFP) five year Indefinite Delivery Indefinite Quantity (IDIQ) with single vendor awards, Source America mandatory sole sources, small business set asides and prime vendor style multiple awards.</p> <p>TCCC: Operator &amp; Medic Kits - Program managed by Program Manager - Special Operations Forces Survival, Support, and Equipment Systems (PM - SOF SSES) using US Army Medical Materiel Agency prime vendor contracts for equipment purchases and Special Operations Forces Support Activity (SOFSA) for warehousing and sustainment. CASEVAC Set - Program managed by PM - SOF SSES and utilizes and IDIQ Commercial-Off-The-Shelf (COTS) prime integrator contract.</p> <p>RC-IED: USSOCOM collaborates with the DOD Electronic Counter Measures (ECM) managers and other government agencies in order to maintain Joint Force compatibility and improve program affordability. All next generation ECM development designed to support SOF missions in great power competition, while maintaining cost effective counter violent extremist organization (CVEO) capabilities. Centralized life cycle sustainment of SOF ECM inventory supports Theater Special Operations Command operational demand as Theater Provided Equipment (TPE), Component Continental United States home station training, and rapid deployment requirements. SOF collaborates with the Joint Services, Academia and other government agencies to maintain interoperability and cost effectiveness. SOF ECM will continue to leverage the SOF-to-Service transition of proven capabilities.</p> <p>C-UAS: SOF C-UAS acquisition strategy focuses on the establishment of a SIP to work alongside Program Manager Counterproliferation. Together, we develop and integrate various sensors in mounted, dismounted and expeditionary fixed-site configurations that enhance SOF's ability to detect, identify, classify, locate, track,</p>			

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<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> S385 / <i>Soldier Protection and Survival Systems</i>
<p>deter, defeat, and exploit unmanned systems threats. While the services focus primarily on providing capability to address fixed site defense of homeland and Forward Operating Bases (FOBs); SOF requires an increased level of autonomy, lower size, weight, and power (SWaP), and limited signature solutions. Upon completion of various Combat Evaluations in FY20, C-UAS will transition into a Counter Unmanned Systems (CUxS) Program of Record with an approved Capabilities Development Document (CDD). Contracts are expected to be a combination of FFP and Cost type through full and open competition across the SOCOM focus areas. SOF C-UAS collaborates with the Joint C-UAS Office (JCO), Academia and other government agencies for solutions and to maintain interoperability and cost effectiveness when appropriate. SOF will continue to leverage the SOF-to-Service transition of proven capabilities where possible.</p> <p>PSM: Signature reducing technologies will be embedded into SOF clothing and equipment via modified commercial-off-the-shelf variants. Contracts in support of fielding/sustainment of PSM clothing and equipment will be a combination of sole source FFP five year IDIQ contracts, Source America mandatory sole sources, small business set asides and prime vendor style multiple award contracts. PSM will utilize SOFSA for warehousing and sustainment.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S385 / Soldier Protection and Survival Systems					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOF Personal Equipment Advanced Requirements (SPEAR) - Protective Combat Uniform (PCU)	Various	PM-SSES : Natick, MA	0.647	0.059	Jan 2020	0.400	Jan 2021	0.409	Jan 2022	-		0.409	Continuing	Continuing	-
SPEAR - Hearing Protection and Communications Headsets	Various	PM-SSES : Natick, MA	1.345	0.041	Jan 2020	0.300	Jan 2021	0.300	Jan 2022	-		0.300	Continuing	Continuing	-
SPEAR Modular Glove System (MGS)	Various	PM-SSES : Natick, MA	0.050	0.005	Jan 2020	0.030	Jan 2021	0.030	Jan 2022	-		0.030	Continuing	Continuing	-
SPEAR - Load Carriage System (LCS) and Backpacks	Various	PM-SSES : Natick, MA	0.090	0.017	Mar 2020	0.100	Mar 2021	0.100	Mar 2022	-		0.100	Continuing	Continuing	-
SPEAR - Power and Data Management	Various	PM-SSES : Natick, MA	-	-		-		0.750	Apr 2022	-		0.750	Continuing	Continuing	-
Counter Radio Controlled-Improvised Explosive Device (RC-IED) - Next Generation Capability Development	C/Various	Various : Various	-	-		-		2.327	Jun 2022	-		2.327	Continuing	Continuing	-
Counter Unmanned Aerial System (C-UAS) Emerging Threat Development (Dismount/Mount/ Expeditionary) Overseas Contingecy Operations (OCO)	C/Various	Various : Various	-	1.741	Apr 2020	-		-		-		-	0.000	1.741	-
C-UAS Emerging Threat / Advanced Technology Development (Systems Integration Partner)	C/Various	Various : Various	-	2.551	Mar 2020	-		3.689	Mar 2022	-		3.689	Continuing	Continuing	-
C-UAS Emerging Threat / Advanced Technology Development (Systems Integration Partner) (OCO)	C/Various	Various : Various	-	-		3.527	Apr 2021	-		-		-	0.000	3.527	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S385 / Soldier Protection and Survival Systems					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
C-UAS Sensor Integration Module (SIM) Phase I: Concept Development (OCO)	C/Various	Command, Control, Communications, Computers, and Counter-intelligence ISR Center, Night Vision & Electronic Sensors Directorate : Ft. Belvoir, VA	3.000	-		-		-		-		-	0.000	3.000	-
C-UAS SIM Phase II: Prototype Development	C/Various	C5ISR Center, Night Vision & Electronic Sensors Directorate : Ft. Belvoir, VA	-	1.318	Mar 2020	-		-		-		-	0.000	1.318	-
C-UAS SIM Phase III: Operational Assessment and Test (OCO)	C/Various	Various : Various	-	2.552	Apr 2020	-		-		-		-	0.000	2.552	-
Personal Signature Management (PSM) Development (Inc II and III)	Various	Various : Various	0.799	0.747	Jul 2020	0.861	Mar 2021	1.040	Mar 2022	-		1.040	Continuing	Continuing	-
Rotary Wing Aviation Helmet Congressional Add	C/Various	PM-SSES : Natick, MA	1.500	-		-		-		-		-	0.000	1.500	-
Subtotal			7.431	9.031		5.218		8.645		-		8.645	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SPEAR - PCU testing/ Pre-Planned Product Improvement	Various	PM-SSES : Natick, MA	0.556	0.049	Mar 2020	0.100	Mar 2021	0.100	Mar 2022	-		0.100	Continuing	Continuing	-
SPEAR - MGS Test and Evaluation	Various	PM-SSES : Natick, MA	0.101	0.008	Jan 2020	0.045	Jan 2021	0.045	Jan 2022	-		0.045	Continuing	Continuing	-
SPEAR - Hearing Protection and Comms Headset Test & Evaluation	Various	PM-SSES : Natick, MA	1.878	0.058	Jan 2020	0.162	Jan 2021	0.162	Jan 2022	-		0.162	Continuing	Continuing	-

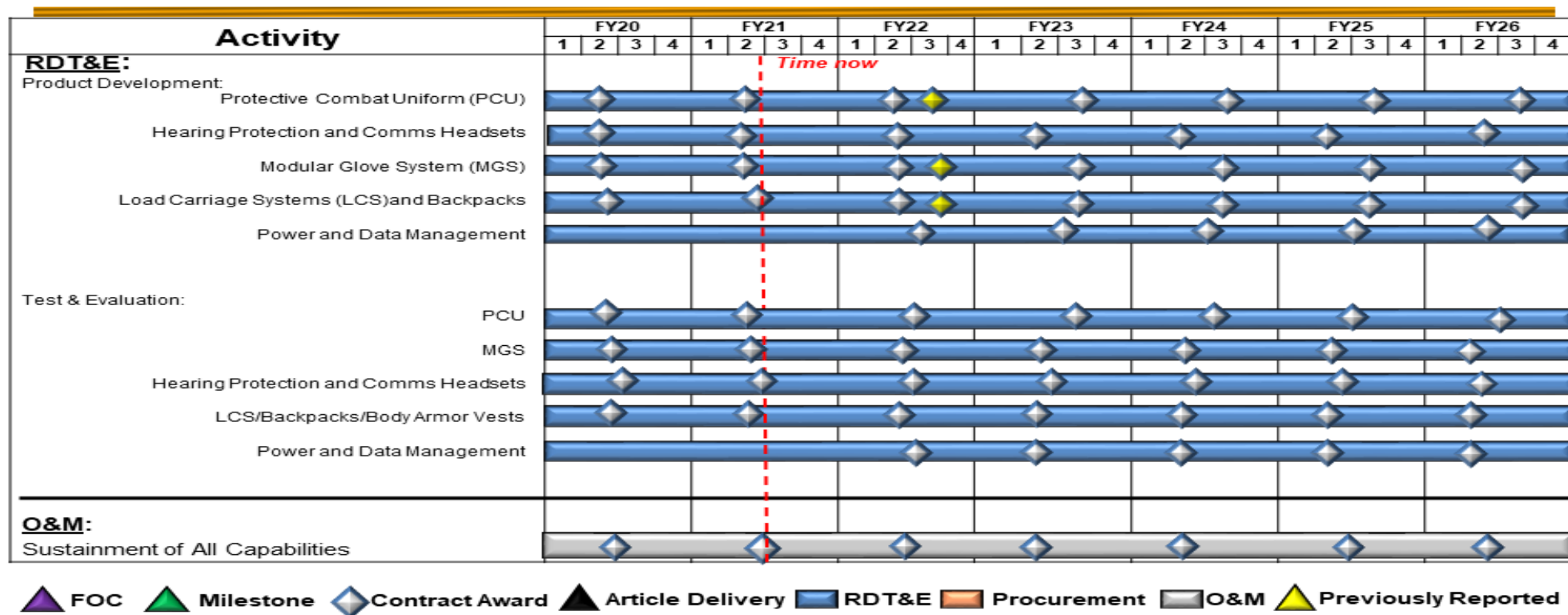
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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S385 / Soldier Protection and Survival Systems					
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SPEAR - LCS/Body Armor Vest/Backpack Material and Prototype Test and Evaluation	Various	PM-SSES : Natick, MA	0.146	0.019	Feb 2020	0.095	Feb 2021	0.095	Feb 2022	-		0.095	Continuing	Continuing	-
SPEAR - Power and Data Managment	Various	PM-SSES : Natick, MA	-	-		-		0.989	Apr 2022	-		0.989	Continuing	Continuing	-
Tactical Combat Casualty Care (TCCC) CASEVAC Sets Development, Test and Evaluation	Various	PM-SSES : Natick, MA	1.738	0.232	Feb 2020	0.229	Jan 2021	0.209	Jan 2022	-		0.209	Continuing	Continuing	-
TCCC Brain Health Test and Evaluation	C/Various	PM-SSES : Natick, MA	-	-		-		0.497	Jan 2022	-		0.497	Continuing	Continuing	-
RC-IED Technology Insertion/Software/ Techniques	C/Various	Various : Various	15.694	1.674	Apr 2020	1.632	Mar 2021	1.677	Mar 2022	-		1.677	Continuing	Continuing	-
C-UAS Test and Evaluation Support	C/Various	Various : Various	1.500	-		-		1.506	Nov 2021	-		1.506	Continuing	Continuing	-
C-UAS Test and Evaluation Support (OCO)	C/Various	Various : Various	-	1.509	Nov 2019	2.269	Mar 2021	-		-		-	0.000	3.778	-
PSM Test and Evaluation	Various	Various : Various	0.798	0.885	Jan 2020	0.862	Jan 2021	0.700	Feb 2022	-		0.700	Continuing	Continuing	-
Prior Year	MIPR	Various : Various	0.865	-		-		-		-		-	0.000	0.865	-
Prior Year (OCO)	Various	Various : Various	0.400	-		-		-		-		-	0.000	0.400	-
Subtotal			23.676	4.434		5.394		5.980		-		5.980	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			31.107	13.465		10.612		14.625		-		14.625	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385 / Soldier Protection and Survival Systems	

## Special Operations Forces Personal Equipment Advanced Requirements (SPEAR) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

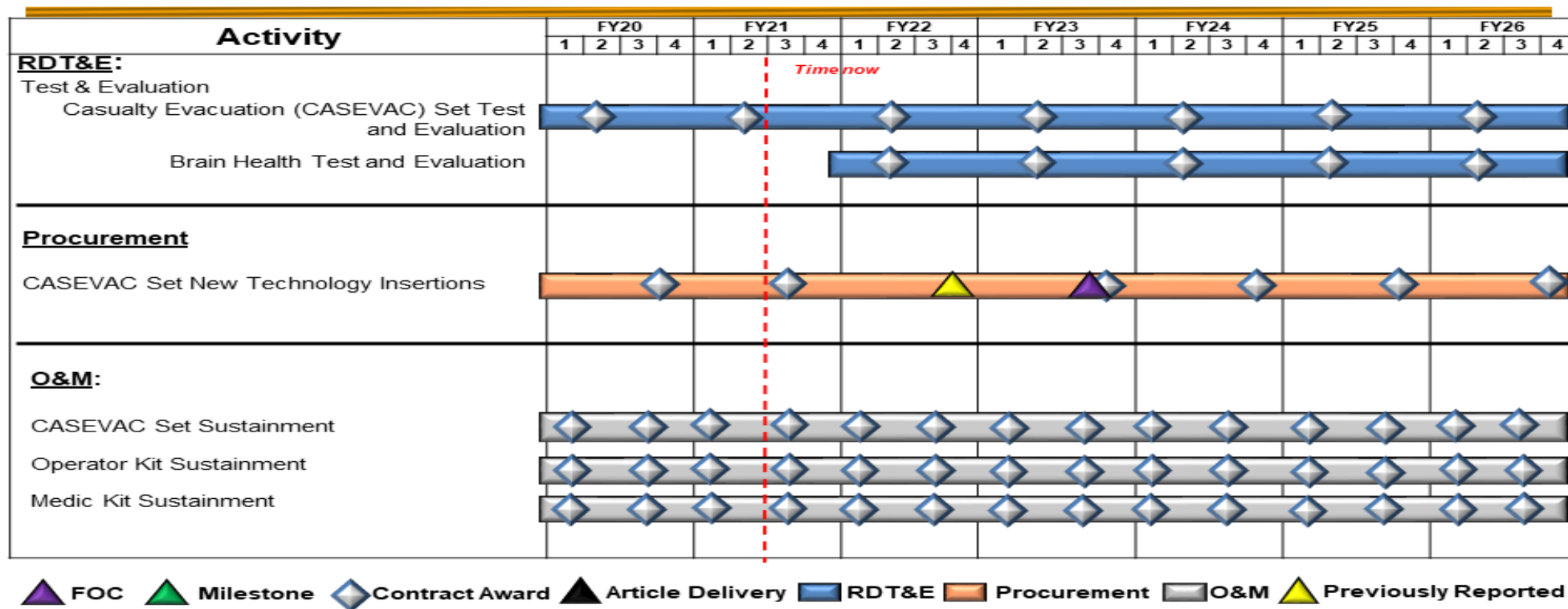
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S385 / Soldier Protection and Survival Systems

# Tactical Combat Casualty Care (TCCC) Schedule





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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

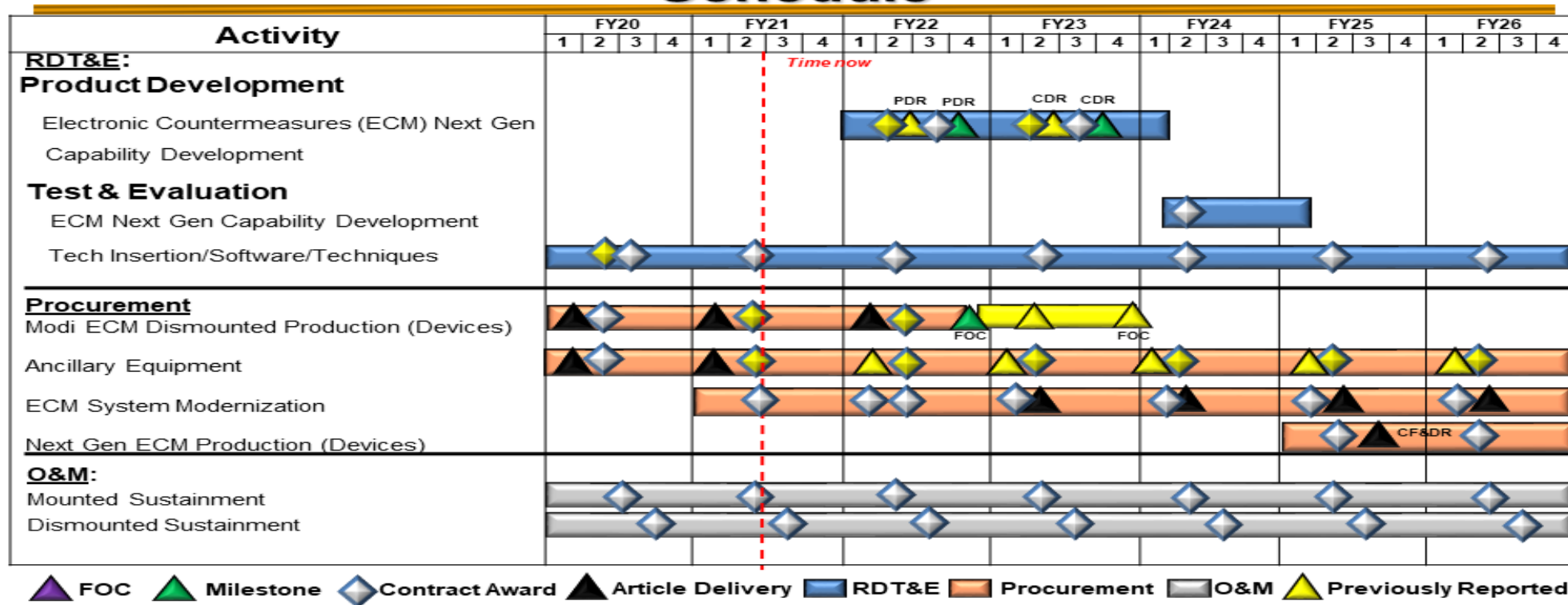
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S385 / Soldier Protection and Survival Systems

## Counter Radio Controlled - Improvised Explosive Device (RC-IED) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

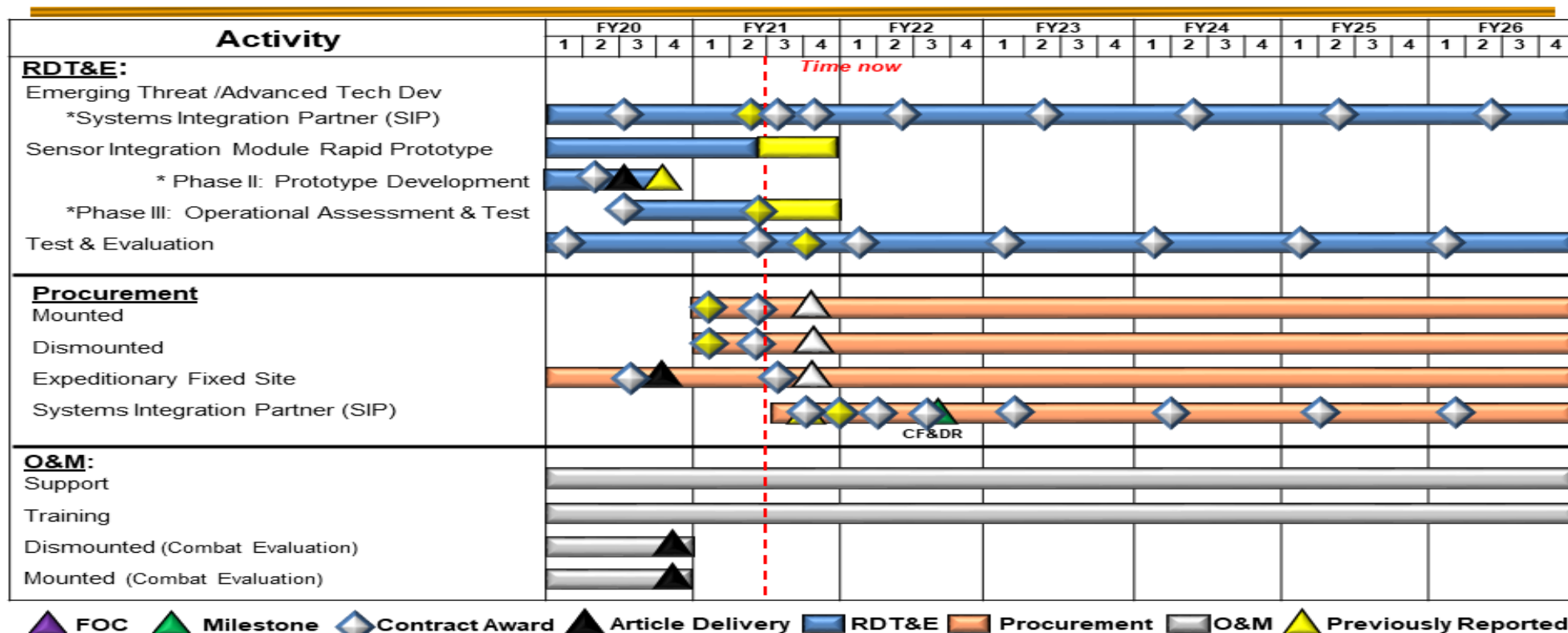
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S385 / Soldier Protection and Survival Systems

# Counter Unmanned Aerial Systems Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

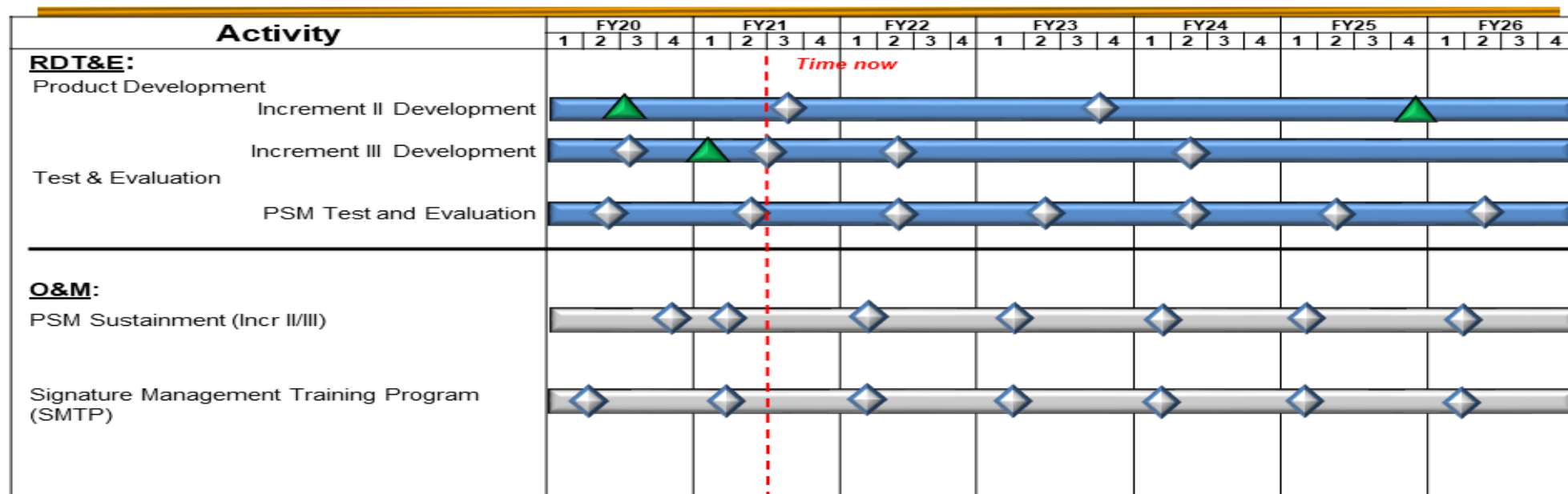
Date: May 2021



Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S385 / Soldier Protection and Survival  
Systems

# Personal Signature Management (PSM) Schedule



 FOC 
  Milestone 
  Contract Award 
  Article Delivery 
  RDT&E 
  Procurement 
  O&M 
  Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385 / Soldier Protection and Survival Systems	

## Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Soldier Protection and Survival Systems (SPEAR)</i></b>				
Protective Combat Uniform (PCU) Product Development	1	2020	4	2026
Hearing Protection & Comms Headsets Product Development	1	2020	4	2026
Modular Glove System (MGS) Product Development	1	2020	4	2026
Load Carriage System (LCS) and Backpacks Product Development	1	2020	4	2026
Power and Data Management Development	1	2020	4	2026
PCU Test & Evaluation	1	2020	4	2026
MGS Test & Evaluation	1	2020	4	2026
Hearing Protection & Comms Headsets Test & Evaluation	1	2020	4	2026
LCS/Backpack/Body Armor Vest Test & Evaluation	1	2020	4	2026
Power and Data Management Test & Evaluation	1	2020	4	2026
<b><i>Tactical Combat Casualty Care (TCCC)</i></b>				
TCCC Casualty Evacuation (CASEVAC) Sets Development, Test & Evaluation	1	2020	4	2026
TCCC Brain Health Test and Evaluation	4	2021	4	2026
<b><i>Counter Radio Controlled-Improvised Explosive Device (R-CIED)</i></b>				
Next Generation Electronic Countermeasures (ECM) Capability Development (Product Development)	1	2022	1	2024
Next Generation ECM Capability Development (Test & Evaluation Support)	2	2024	1	2025
Technology Insertion/Software/Techniques (Test & Evaluation Support)	1	2020	4	2026
<b><i>Counter Unmanned Aerial System (C-UAS)</i></b>				
C-UAS Emerging Threat /Advanced Technology Development (Systems Integration Partner)	1	2020	4	2026
Sensor Integration Module Rapid Prototype Product Development	1	2020	2	2021

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 United States Special Operations Command			Date: May 2021		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems		Project (Number/Name) S385 / Soldier Protection and Survival Systems	
		Start		End	
Events by Sub Project		Quarter	Year	Quarter	Year
C-UAS FoS-SIM - Phase 2 (Prototype Development)		2	2020	3	2020
C-UAS FoS-SIM - Phase 3 (Prototype Operational Assessment and Test)		3	2020	2	2021
C-UAS Test and Evaluation Support		1	2020	4	2026
Personnel Signature Management (PSM)					
PSM Development (Incr II)		1	2020	4	2026
PSM Development (Incr III)		1	2020	4	2026
PSM Test & Evaluation		1	2020	4	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S385A / Body Armor and Associated Equipment			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S385A: Body Armor and Associated Equipment	8.443	1.717	1.738	1.684	-	1.684	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides specialized equipment to meet the unique operator protection and survival requirements of SOF, to include: Army Rangers; Army Special Forces; Navy Sea, Air, Land (SEAL) teams; Navy Special Boat Units; Air Force Operators; and Marine Raiders. Specialized ballistic equipment improves survivability impacting the mobility of SOF while conducting varied missions. These missions are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> SOF Personal Equipment Advanced Requirement (SPEAR)-Ballistic Protection	1.717	1.738	1.684
<b>Description:</b> This project enhances the SPEAR program by supporting body armor helmets and eye protection. It also provides for the research, development, and testing of a variety of body armor and personal protective equipment.			
<b>FY 2021 Plans:</b> Continue foreign ammunition testing and threat validation to assess effectiveness of currently fielded personal protective equipment. Continue development and testing of lightweight body armor and helmets to upgrade systems that have been fielded. Continue evaluation of transparent armor products which include variable light transmission and laser lenses to upgrade systems that have been fielded. Continue development and testing of technologies to upgrade the maritime crewman helmet.			
<b>FY 2022 Plans:</b> Continues foreign ammunition testing and threat validation to assess effectiveness of currently fielded personal protective equipment. Continues development and testing of lightweight body armor and helmets to upgrade systems that have been fielded. Continues evaluation of transparent armor products which include variable light transmission and laser lenses to upgrade systems that have been fielded. Continues development and testing of technologies to upgrade the maritime crewman and rotary wing helmet.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.054 million was made available to support emerging critical Command requirements.			
<b>Accomplishments/Planned Programs Subtotals</b>	1.717	1.738	1.684

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385A / Body Armor and Associated Equipment	

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PROC/0204WARRIOR:: <i>Warrior Systems&lt;\$5M</i>	344.003	342.606	284.548	-	284.548	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

SPEAR ballistic protection equipment takes advantage of modified Commercial-Off-The-Shelf (COTS) or non-developmental items. As United States Special Operations Command required tailored solutions for SOF Mission sets, SPEAR items leveraged from industry are often on cutting edge of technology with modifications specific for SOF missions and require substantial testing in SOF environments. Utilizes Special Operations Forces Support Activity (SOFSa) for warehousing and sustainment, Program Manager Special Operations Forces - Survival, Support, and Equipment Systems (PM - SOF SSES) has cradle to grave responsibility. Contracts in support of SPEAR are a combination of firm fixed price five year indefinite delivery indefinite quantity with single vendor awards, Source America mandatory sole sources, small business set asides and prime vendor style multiple award contracts.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S385A / Body Armor and Associated Equipment					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOF Personal Equipment Advanced Requirement (SPEAR) - Body Armor	Various	PM-SSES : Natick, MA	2.776	0.388	Jun 2020	0.387	Feb 2021	0.556	Feb 2022	-		0.556	Continuing	Continuing	-
SPEAR - Lightweight Ballistic Helmets	Various	PM-SSES : Natick, MA	1.843	0.377	May 2020	0.378	Jan 2021	0.390	Feb 2022	-		0.390	Continuing	Continuing	-
SPEAR - Eye Protection	Various	PM-SSES : Natick, MA	0.286	0.105	Jun 2020	0.116	Mar 2021	0.060	Mar 2022	-		0.060	Continuing	Continuing	-
Subtotal			4.905	0.870		0.881		1.006		-		1.006	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SPEAR - Body Armor	Various	PM-SSES : Natick, MA	1.959	0.377	Jun 2020	0.381	Apr 2021	0.378	Jun 2022	-		0.378	Continuing	Continuing	-
SPEAR - Lightweight Ballistic Helmet	Various	PM-SSES : Natick, MA	1.384	0.377	May 2020	0.381	Apr 2021	0.260	Jun 2022	-		0.260	Continuing	Continuing	-
SPEAR - Transparent Armor	Various	PM-SSES : Natick, MA	0.195	0.093	Jun 2020	0.095	Mar 2021	0.040	Mar 2022	-		0.040	Continuing	Continuing	-
Subtotal			3.538	0.847		0.857		0.678		-		0.678	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			8.443	1.717		1.738		1.684		-		1.684	Continuing	Continuing	N/A
Remarks															



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S385A / Body Armor and Associated Equipment

## Special Operations Forces Personal Equipment Advanced Requirements (SPEAR) - Body Armor Schedule



FOC 
 Milestone 
 Contract Award 
 Article Delivery 
 RDT&E 
 Procurement 
 O&M 
 Previously Reported

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> S385A / <i>Body Armor and Associated Equipment</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Body Armor and Associated Equipment</i></b>				
Body Armor Product Development	1	2020	4	2026
Lightweight Ballistic Helmets Product Development	1	2020	4	2026
Eye Protection Product Development	1	2020	4	2026
Body Armor Test & Evaluation	1	2020	4	2026
Lightweight Ballistic Helmets Test & Evaluation	1	2020	4	2026
Transparent Armor Test & Evaluation	1	2020	4	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S395 / Visual Augmentation, Lasers and Sensor Systems			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S395: Visual Augmentation, Lasers and Sensor Systems	15.096	3.168	2.171	5.047	-	5.047	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project provides for development, testing and integration of specialized visual augmentation, binocular and monocular night vision devices, laser markers, laser designators, geo-location systems, weapon optics, weapon aiming lasers, sensor systems, visible lights, infrared imagers, clandestine pointers, simulators and accessories to meet the unique requirements of Special Operations Forces (SOF). These projects ensure SOF hyper-enabled operators will remain technologically superior to enemy threats and ensure mission success.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2020	FY 2021	FY 2022	
Title: Visual Augmentation Systems (VAS)									3.168	2.171	5.047	
Description: Sensor technologies being developed include image intensification thermal imaging, short wave infrared, multi-spectral, fusion, and other sensor types. Developments will decrease weight, increase range, increase situational awareness, provide data, image processing, image filtering, determine wind speed, observe bullet trace, and sensor fusion to be able to detect, identify, classify and engage targets at greater ranges. Some efforts may be tied to Hyper-Enabled Operator (HEO).												
FY 2021 Plans: Continue development and testing of visual augmentation, laser devices, and continue development and testing of simulators to improve situational awareness, sharing of data/images, target acquisition, and training.												
FY 2022 Plans: Continues development and testing of visual augmentation, laser devices, and continues development and testing of simulators to improve situational awareness, sharing of data/images, target acquisition, and training. Initiates the Joint Acquisition Task Force (JATF)/HEO transition of an integrated head-mounted sensor and augmented reality display providing threat detection. Real-time shared imaging and sensor discovery with distributed algorithm processing of a common operating picture.												
FY 2021 to FY 2022 Increase/Decrease Statement: Increase of \$2.876 million will initiate the JATF/HEO transition of an integrated head-mounted sensor and Augmented Reality (AR) display providing threat detection.												
Accomplishments/Planned Programs Subtotals									3.168	2.171	5.047	

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> S395 / <i>Visual Augmentation, Lasers and Sensor Systems</i>	

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0204WARRIOR: <i>Warrior Systems&lt;\$5M</i>	344.003	342.606	284.548	-	284.548	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

Evolutionary acquisition and leveraging emerging technologies. An evolutionary approach delivers capability in increments, recognizing, up front, the need for future capability improvements. Full and open competition; Contracts are a combination of five-year Firm Fixed Price (FFP) Indefinite Delivery Indefinite Quantity (IDIQ) and small business set asides at several location; primarily via Naval Surface Warfare Center, Crane Contracting office, USSOCOM Contracting Office and other contracting offices.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S395 / Visual Augmentation, Lasers and Sensor Systems					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Visual Augmentation Systems (VAS) Product Development (Laser and Optic)	C/CPFF	USSOCOM : Tampa, FL	8.934	1.514	Apr 2020	1.000	Apr 2021	4.367	Mar 2022	-		4.367	Continuing	Continuing	-
Visual Augmentation Systems (VAS) Product Development (Simulator)	C/CPFF	USSOCOM : Tampa, FL	1.500	1.444	Apr 2020	0.481	Apr 2021	0.480	Apr 2022	-		0.480	Continuing	Continuing	-
Prior Year	C/CPFF	USSOCOM : Tampa, FL	1.500	-		-		-		-		-	Continuing	Continuing	-
Prior Year Overseas Contingency Operations (OCO)	C/CPFF	USSOCOM : Tampa, FL	2.667	-		-		-		-		-	0.000	2.667	-
Subtotal			14.601	2.958		1.481		4.847		-		4.847	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
VAS Test and Evaluation	C/CPFF	USSOCOM : Tampa, FL	0.495	-		-		-		-		-	0.000	0.495	-
VAS Optic Test and Evaluation	C/CPFF	USSOCOM : Tampa FL	-	0.105	Apr 2020	0.345	Apr 2021	0.100	Sep 2022	-		0.100	Continuing	Continuing	-
VAS Laser Test and Evaluation	C/CPFF	USSOCOM : Tampa FL	-	0.105	Apr 2020	0.345	Apr 2021	0.100	Aug 2022	-		0.100	Continuing	Continuing	-
Subtotal			0.495	0.210		0.690		0.200		-		0.200	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			15.096	3.168		2.171		5.047		-		5.047	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

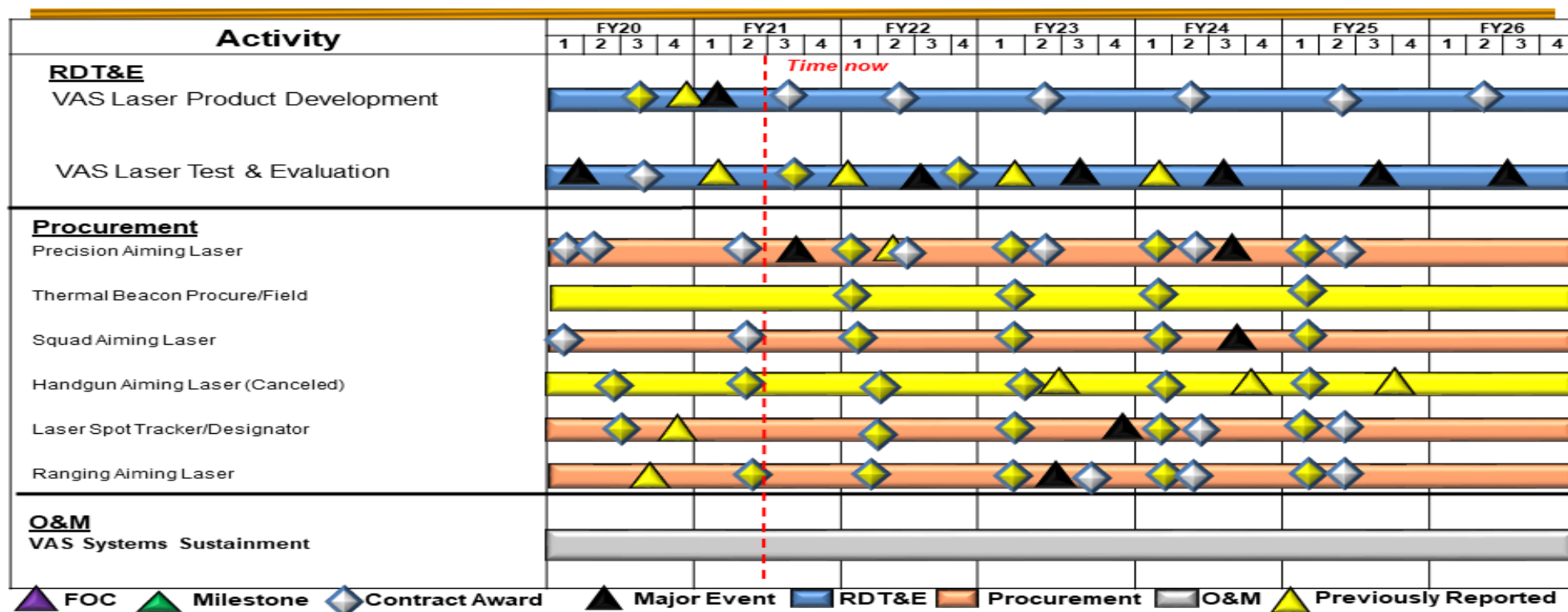
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S395 / Visual Augmentation, Lasers and  
Sensor Systems

# Visual Augmentation Systems Laser Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

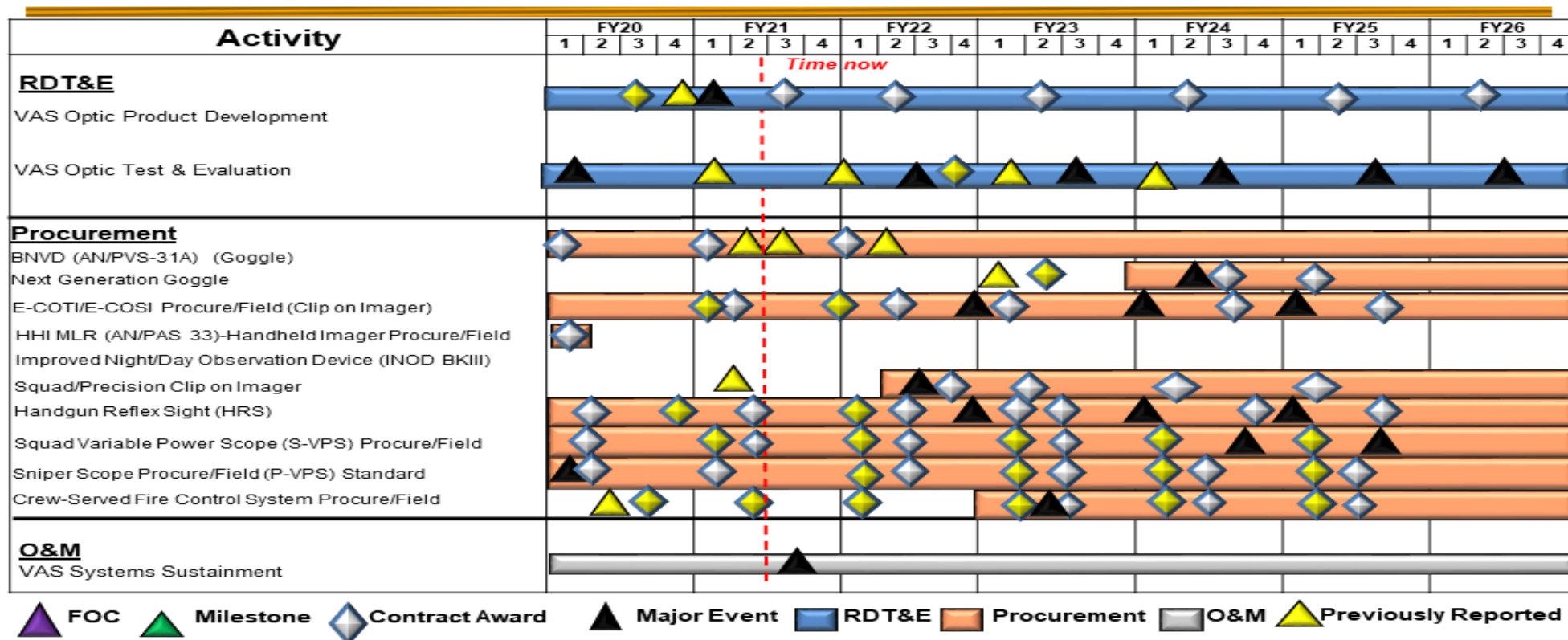
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S395 / Visual Augmentation, Lasers and  
Sensor Systems

# Visual Augmentation Systems Optic Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

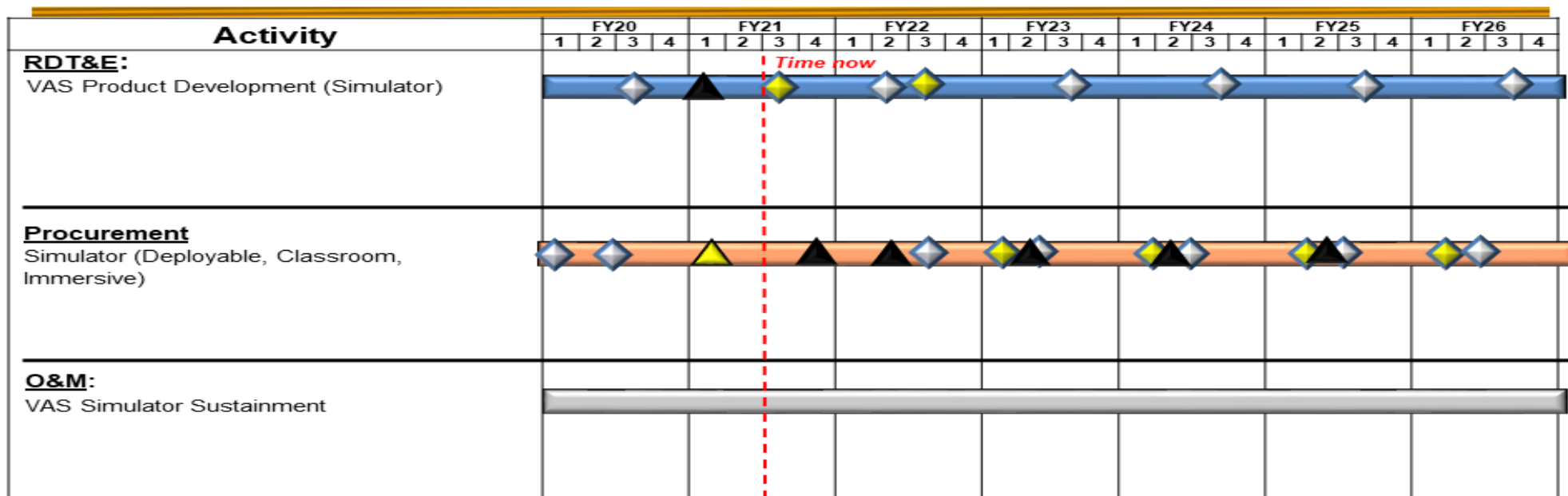
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S395 / Visual Augmentation, Lasers and  
Sensor Systems

# Visual Augmentation Systems Simulator Schedule



FOC 
 Milestone 
 Contract Award 
 Article Delivery 
 RDT&E 
 Procurement 
 O&M 
 Previously Reported



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> S395 / <i>Visual Augmentation, Lasers and Sensor Systems</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Visual Augmentation Systems</i></b>				
VAS Laser Development and Test	1	2020	4	2026
VAS Optic Development and Test	1	2020	4	2026
VAS Simulator Development and Test	1	2020	4	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S700 / Communications Equipment and Electronics Systems			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S700: Communications Equipment and Electronics Systems	44.234	16.738	26.431	21.456	-	21.456	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides for communication systems to meet emergent requirements to support Special Operations Forces (SOF). Communications Equipment and Electronics Systems is a continuing effort to develop smaller, lighter, more efficient and more robust SOF Command, Control, Communications, and Computer (C4) capabilities.

United States Special Operations Comand C4 systems comprise an integrated network of systems providing positive command and control and the timely exchange of information to all organizational echelons. The C4 systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration within the Global Information Grid (GIG). The GIG is a multitude of existing and projected national assets that allows SOF elements to operate with any force combination in multiple environments.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Satellite Deployable Node (SDN)	9.002	10.641	5.634
<b>Description:</b> SDN is a family of deployable, super high frequency, multi-band, Satellite Communications (SATCOM) systems providing the transport path for high-capacity, voice, data, Video Teleconferencing (VTC), and Full Motion Video (FMV) at all levels of classification. It consists of SDN subprograms, transport for intelligence variants, technology insertions and Capital Equipment replacement.			
<b>FY 2021 Plans:</b> Continue assessments, tests, and evaluations for wide-band Communications On The Move (COTM) maritime, ground mobile, and airborne technologies. Continue assessments in Size, Weight and Power (SWaP) reduction across all SDN systems. Continue evaluation of High Throughput Satellite (HTS) constellations and terminals. Continue evaluation of resilience of systems in a degraded communications environment.			
<b>FY 2022 Plans:</b> Continues assessments, tests, and evaluations for wide-band COTM maritime, ground mobile, and airborne technologies. Continues assessments in SWAP reduction across all SDN systems. Continues evaluation of HTS constellations and terminals. Continues evaluation of resilience of systems in a degraded communications environment.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> S700 / <i>Communications Equipment and Electronics Systems</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
Decrease of \$5.007 million is due to technology development and reduced HTS service assessments.			<b>FY 2022</b>
<b>Title:</b> Civil Information Management (CIM) <b>Description:</b> The CIM Data Processing System (CIMDPS) is an automation system that assists active Civil Affairs (CA) and others engaged in civil-military operations to collect, process, analyze, maintain, mine, and deliver Civil Information and analysis products to support the Next Generation CIMDPS Systems. <b>FY 2021 Plans:</b> Complete development and integration of the Next Generation CIMDPS hardware platform in support of CA communities. <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.010 million is due to CIMDPS program divestiture.		-	0.010
<b>Title:</b> Special Communications (SPCOM) Enterprise program <b>Description:</b> SPCOM includes organizations, practices, processes, services, networks, systems and subsystems that manage and provide clandestine exchange of information between elements (field-to-field, field-to-base, base-to-field) for worldwide deployed SOF units, often in austere environments with heavy adversarial monitoring. Acquisition efforts are structured for rapid, tailored development to counter adaptable emerging threats in all theaters of SOF sensitive missions. <b>FY 2021 Plans:</b> Continue segment development for the SPCOM enterprise; develop means and methods to provide near-term impact to operators. Continue development of anti-intrusion/anti-tamper capabilities. Continue extensive vulnerability assessments plus independent verification and validation. Acquisition efforts are structured for rapid, tailored development to counter adaptable emerging threats in all theaters of SOF sensitive missions. <b>FY 2022 Plans:</b> Continues segment development for the SPCOM enterprise; develops means and methods to provide near-term impact to operators. Continues development of anti-intrusion/anti-tamper capabilities. Continues extensive vulnerability assessments plus independent verification and validation. Acquisition efforts are structured for rapid, tailored development to counter adaptable emerging threats in all theaters of SOF sensitive missions. <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.019 million is due to additional capability developments in support of SPCOM.		7.736	11.201
<b>Title:</b> Mission Command System Common Operational Picture (MCS/COP)		-	4.579
			4.602

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command										<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7				<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>				<b>Project (Number/Name)</b> S700 / <i>Communications Equipment and Electronics Systems</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>										<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<p><b>Description:</b> MCS/COP provides shared situational awareness for Special Operations Forces Commanders across all domains at the tactical, operational, and strategic levels. The MCS/COP delivers a near-real time operational understanding of the intelligence and operational environment to support decision making.</p> <p><b>FY 2021 Plans:</b> Begin rapid prototyping, product development, and operational testing and evaluation based upon dynamic and emergent operational requirements.</p> <p><b>FY 2022 Plans:</b> Continues rapid prototyping, product development, and operational testing and evaluation based upon dynamic and emergent operational requirements.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.023 million will accelerate rapid prototyping and product development of near-real time intelligence and operational environment capabilities to support decision making.</p>												
<b>Accomplishments/Planned Programs Subtotals</b>										16.738	26.431	21.456
<b>C. Other Program Funding Summary (\$ in Millions)</b>												
<b>Line Item</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
• PROC/0204WARRIOR: <i>Warrior Systems&lt;\$5M</i>	344.003	342.606	284.548	-	284.548	-	-	-	-	-	-	
• PROC/0204OTHER: <i>OTHER ITEMS &lt;\$5M</i>	103.059	82.691	62.722	-	62.722	-	-	-	-	-	-	
<b>Remarks</b>												
<b>D. Acquisition Strategy</b>												
SDN is a fielded program with Evolutionary Technology Insertions (ETI) into all variants: Heavy, Medium, and Light, and wide-band COTM. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.												
SPCOM is an ETI effort to provide and support multiple field mission sets fully integrated with secure transports for complete end-to end capabilities. In particular, rapid, phased prototyping is prioritized to both develop operationally-relevant prototypes but also to be flexible and agile in ensuring countermeasures against dynamically adapting special communication threats in all theaters. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.												

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>
<p>CIM has an evolutionary acquisition strategy to enhance its capability to meet the CA community's emerging requirements.</p> <p>MCS/COP employs the software acquisition pathway to facilitate rapid and iterative delivery of operational software to meet dynamic SOF requirements. Commercial, open and government sources are leveraged for required certifications, system level integration, functional, and operational testing and evaluations.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S700 / Communications Equipment and Electronics Systems					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Satellite Deployable Node (SDN) Development	Various	Various : Various	11.350	6.375	Mar 2020	5.321	Jan 2021	1.125	Dec 2021	-		1.125	Continuing	Continuing	-
Civil Information Management Data Processing System (CIMDPS) Development	PO	SOF AT & L - KS : MACDILL AFB	1.788	-		0.010	Mar 2021	-		-		-	0.000	1.798	-
Special Communications (SPCOM) Enterprise Capability Development	C/Various	Various : Various	15.206	6.237	Jul 2020	9.330	Mar 2021	9.220	May 2022	-		9.220	Continuing	Continuing	-
SPCOM Technology Vulnerability Assessments	MIPR	MITRE : Bedford, MA	3.099	1.155	May 2020	1.423	Dec 2020	1.600	Apr 2020	-		1.600	Continuing	Continuing	-
Mission Command System Common Operational Picture (MCS/COP)	C/Various	Various : Various	-	-		2.292	Apr 2021	3.500	Mar 2022	-		3.500	Continuing	Continuing	-
Subtotal			31.443	13.767		18.376		15.445		-		15.445	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SDN Evaluation and Testing	Various	Various : Various	11.150	2.627	Apr 2020	5.320	Feb 2021	4.509	Dec 2021	-		4.509	Continuing	Continuing	-
SPCOM Independent Verification and Validation	MIPR	MITRE : Bedford, MA	1.641	0.344	Mar 2020	0.448	Dec 2020	0.400	Apr 2022	-		0.400	Continuing	Continuing	-
Mission Command System Common Operational Picture (MCS/COP)	C/Various	Various : Various	-	-		2.287	Apr 2021	1.102	Mar 2022	-		1.102	Continuing	Continuing	-
Subtotal			12.791	2.971		8.055		6.011		-		6.011	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			44.234	16.738		26.431		21.456		-		21.456	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command							Date: May 2021			
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems		Project (Number/Name) S700 / Communications Equipment and Electronics Systems				
	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks										

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

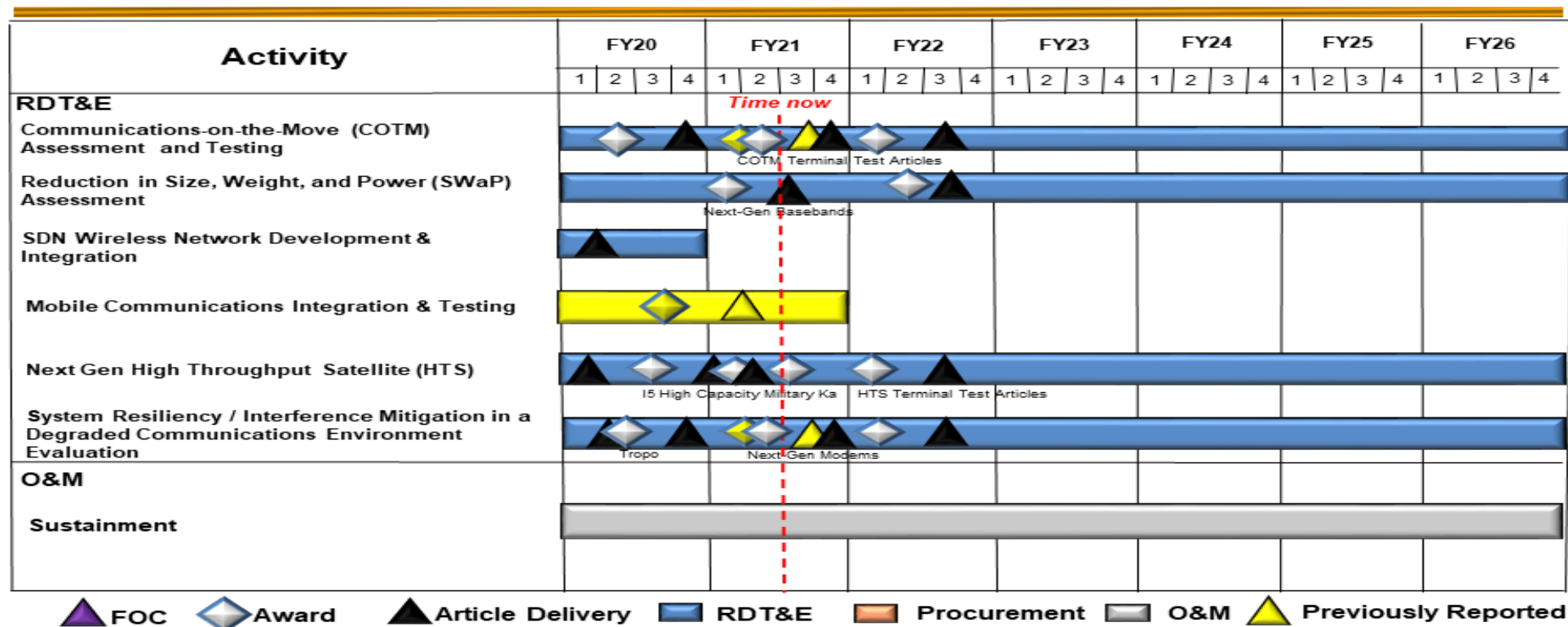
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S700 / Communications Equipment and Electronics Systems

## Satellite Deployable Node (SDN) Schedule





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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

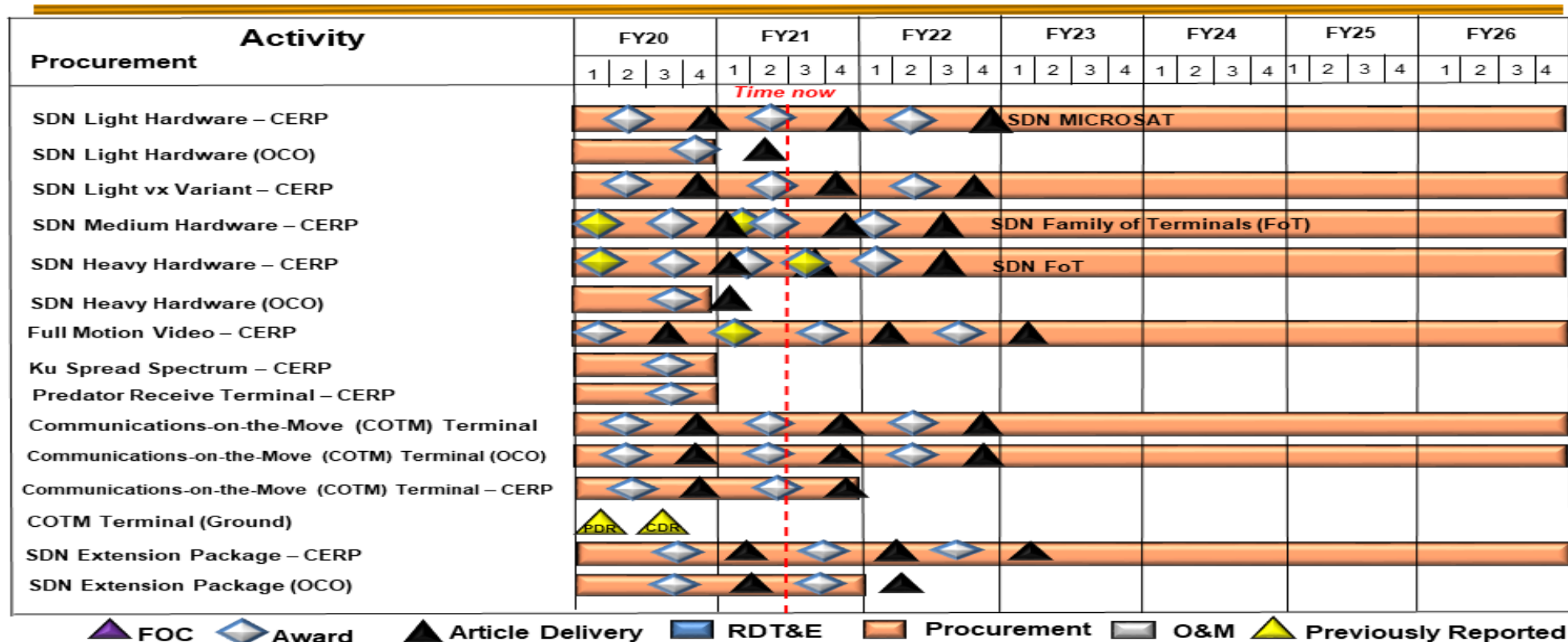
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S700 / Communications Equipment and Electronics Systems

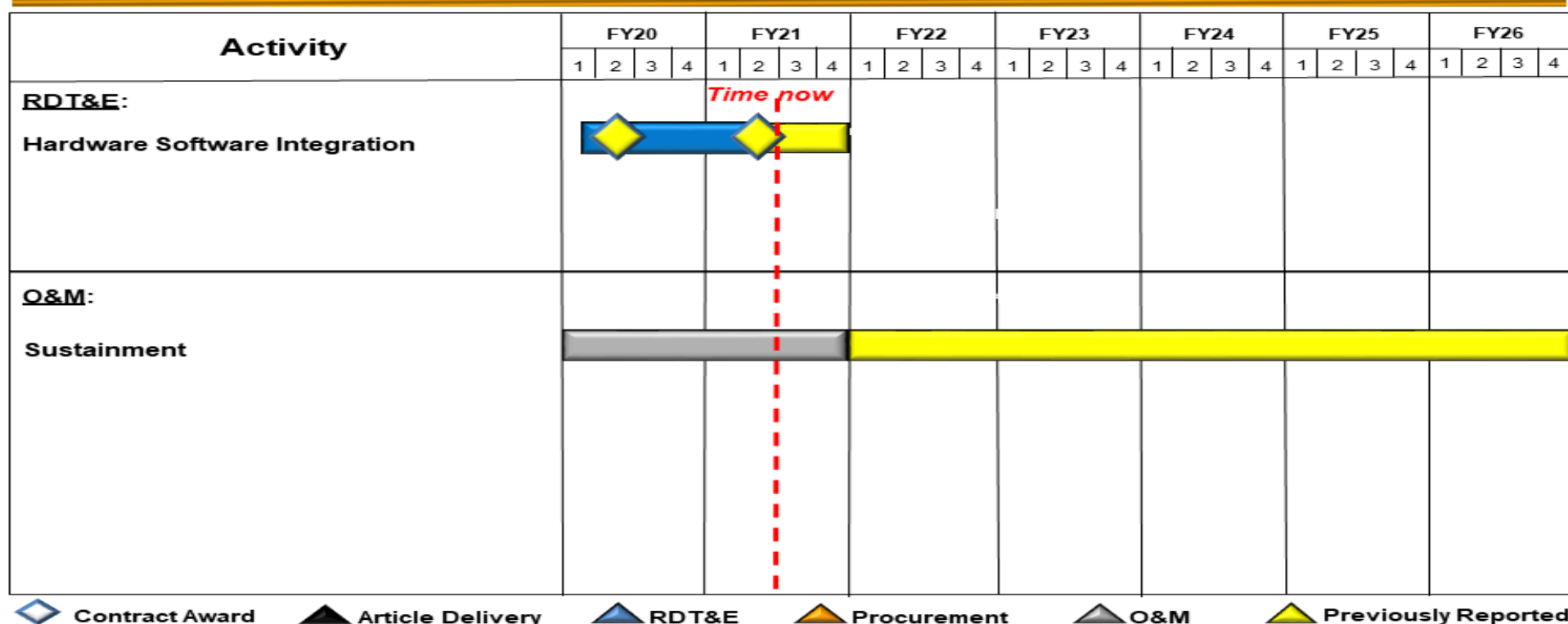
## SDN Schedule (con't)



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> <i>S700 / Communications Equipment and Electronics Systems</i>	

## Civil Information Management Data Processing Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

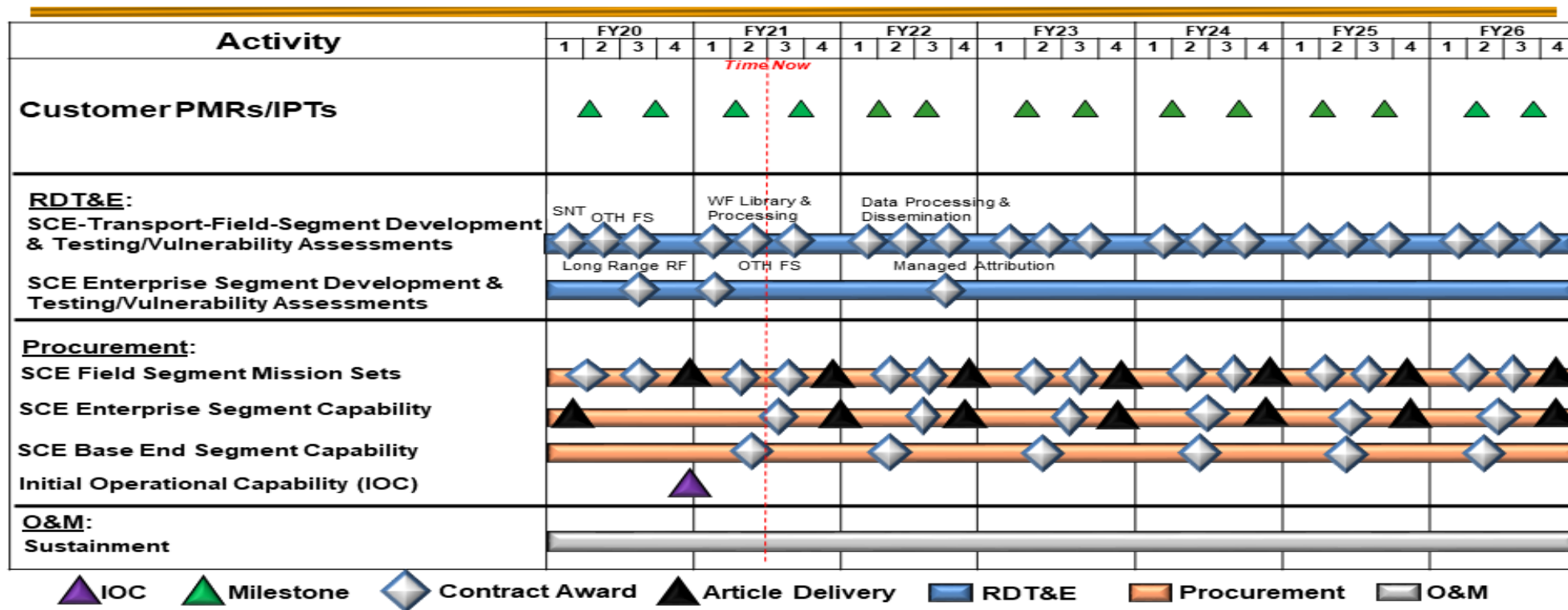
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S700 / Communications Equipment and Electronics Systems

# Special Communications Enterprise (SPCOM) Schedule

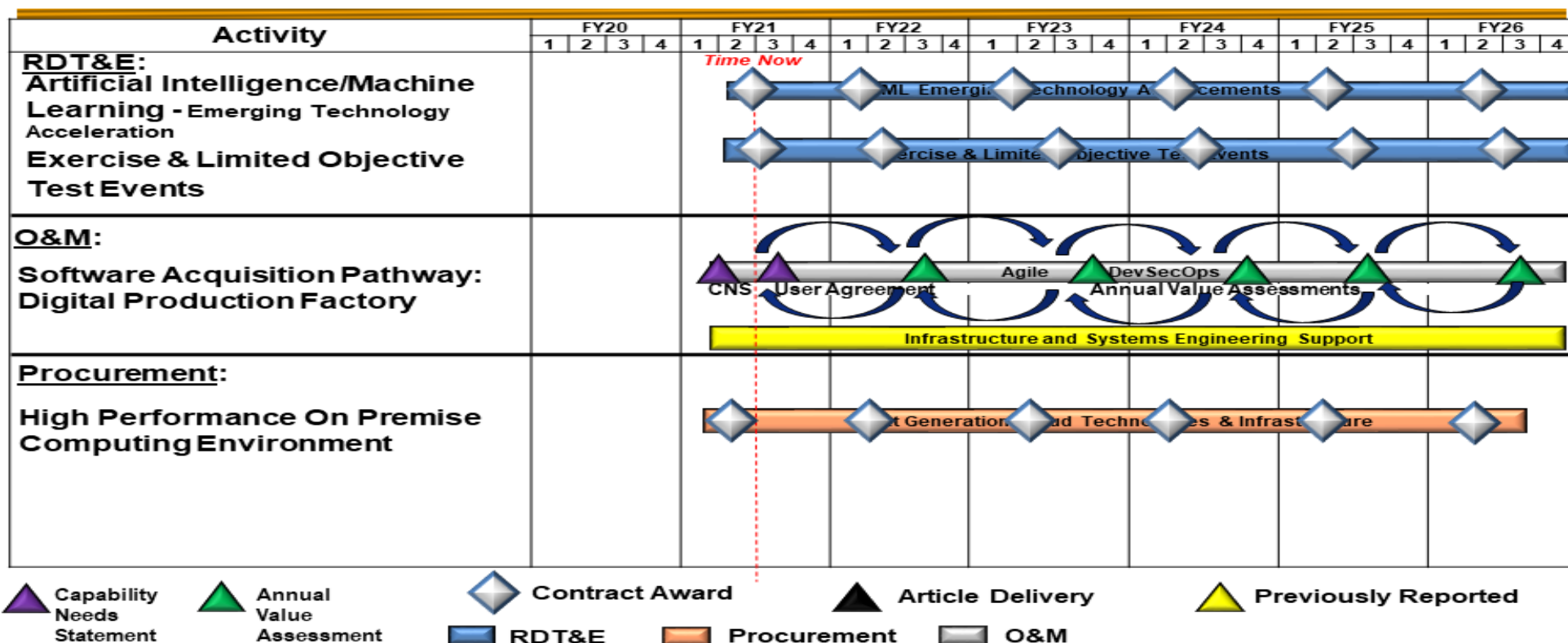


SNT: Secure Note Taking    OTH FS: Over the Horizon Field Set  
RF: Radio Frequency    WF: Waveform

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S700 / Communications Equipment and Electronics Systems

## Mission Command System (MCS)/ Common Operational Picture (COP) Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> <i>S700 / Communications Equipment and Electronics Systems</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>SOF Deployable Node (SDN)</i></b>				
Communications-on-the-Move (COTM) Assessment & Testing	1	2020	4	2026
Assess Reduction in Size, Weight, and Power (SWaP)	1	2020	4	2026
SDN Wireless Network Development & Integration	1	2020	4	2020
Next Generation High Throughput (HTS) Satellite Market Research	1	2020	4	2026
Evaluate System Resiliency / Interference Mitigation in Degraded Communications Environment Evaluation	1	2020	4	2026
<b><i>Civil Information Management (CIM)</i></b>				
Hardware Software Integration	1	2020	2	2021
<b><i>Special Communications (SPCOM) Enterprise Program</i></b>				
Transport - Field Segment Kit Development and Testing/Vulnerability Assessments	1	2020	4	2026
Enterprise Segment Development and Testing/Vulnerability Assessments	1	2020	4	2026
<b><i>Mission Command System Common Operational (MCS/COP)</i></b>				
Artificial Intelligence/Machine Learning (AI/ML)	3	2021	4	2026
Exercise & Limited Objective Test Events	3	2021	4	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S710 / Tactical Systems Development			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S710: Tactical Systems Development	7.238	2.710	3.344	6.331	-	6.331	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project provides for development, testing, and integration of specialized automation equipment to meet the unique requirements of Special Operations Forces (SOF). Specialized automation equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2020	FY 2021	FY 2022	
Title: Tactical Local Area Network (TACLAN) Suites									2.710	3.344	3.068	
Description: TACLAN provides SOF operational commanders and forward deployed forces advanced networking, automated data processing, storage, and display capabilities to support situational awareness, mission planning and execution, and command and control of forces. The TACLAN consists of Suites, Mission Planning Kits, Field Computing Devices (FCD), and tactical work stations.												
FY 2021 Plans: Continue integration and testing of Evolutionary Technology Insertions (ETIs) for TACLAN FCD and Network Management Suite upgrades. Continue the development of Mobile Edge Computing capabilities for integration and assessment in the TACLAN Family of Systems.												
FY 2022 Plans: Continues integration and testing of ETIs for TACLAN FCD and Network Management Suite upgrades. Completes the development of Mobile Edge Computing capabilities for integration and assessment in the TACLAN Family of Systems.												
FY 2021 to FY 2022 Increase/Decrease Statement: Decrease of \$0.276 million is due to the completion of Mobile Edge Computing integration and assessments.												
Title: Digital Ecosystem (DE)									-	-	3.263	
Description: Provide enterprise solutions to address SOF mission sets requiring collection, processing, and analysis of publicly available, non publicly available, and commercially available information. Mission sets supported include (but not limited to): Civil Affairs (CA), Counterintelligence (CI), Counter-Threat Finance (CTF), Identity Management (IdM)/Signature Management,												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command							<b>Date:</b> May 2021				
<b>Appropriation/Budget Activity</b> 0400 / 7				<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>			<b>Project (Number/Name)</b> S710 / <i>Tactical Systems Development</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>							<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>		
Information Operations (IO), Open Source Intelligence (OSINT), Operational Preparation of the Environment (OPE) and Targeting. Additional detail provided under separate cover, to include schedule.											
<b>FY 2022 Plans:</b> Develops, tests, and implements additional features. Continues incorporation of additional data sources, improves data fusion and display methods.											
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$3.263 million is for expansion of data sources and analysis tool development. Funding for FY20 and FY21 is located in PE 1160408BB/Operational Enhancements.											
<b>Accomplishments/Planned Programs Subtotals</b>							2.710	3.344	6.331		
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PROC/0204OTHER: OTHER ITEMS <\$5M	103.059	82.691	62.722	-	62.722	-	-	-	-	-	-
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
<ul style="list-style-type: none"> <li>TACLAN - The TACLAN evolutionary acquisition strategy includes the use of commercial and government agency sources, that will be leveraged for required certifications, functional and operational test, and acceptance support.</li> <li>DE - In accordance with DoDI 5000.87, this program is transitioning to the Software Acquisition Pathway. The acquisition strategy under this pathway will promote continuous engineering and delivery of capability throughout the software lifecycle.</li> </ul>											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S710 / Tactical Systems Development					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Digital Ecosystem (DE)	C/FFP	Various : Various	-	-		-		3.263	Mar 2022	-		3.263	Continuing	Continuing	-
Subtotal			-	-		-		3.263		-		3.263	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Tactical Local Area Network (TACLAN) Field Computing Devices (FCD) Upgrades	Reqn	Raven Tek : Tampa, FL	3.645	0.760	Mar 2020	1.500	Mar 2021	3.068	Mar 2022	-		3.068	Continuing	Continuing	-
Network Management Suite Upgrades	Reqn	Raven Tek : Tampa, FL	2.993	1.000	Mar 2020	1.294	Apr 2021	-		-		-	Continuing	Continuing	-
Mobile Edge Computing	Reqn	Raven Tek : Tampa, FL	0.100	0.450	Aug 2020	0.550	Aug 2021	-		-		-	Continuing	Continuing	-
Tactical Secret Networking	Reqn	Raven TEK : Tampa, FL	0.500	0.500	Apr 2020	-		-		-		-	Continuing	Continuing	-
Subtotal			7.238	2.710		3.344		3.068		-		3.068	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			7.238	2.710		3.344		6.331		-		6.331	Continuing	Continuing	N/A
Remarks															



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

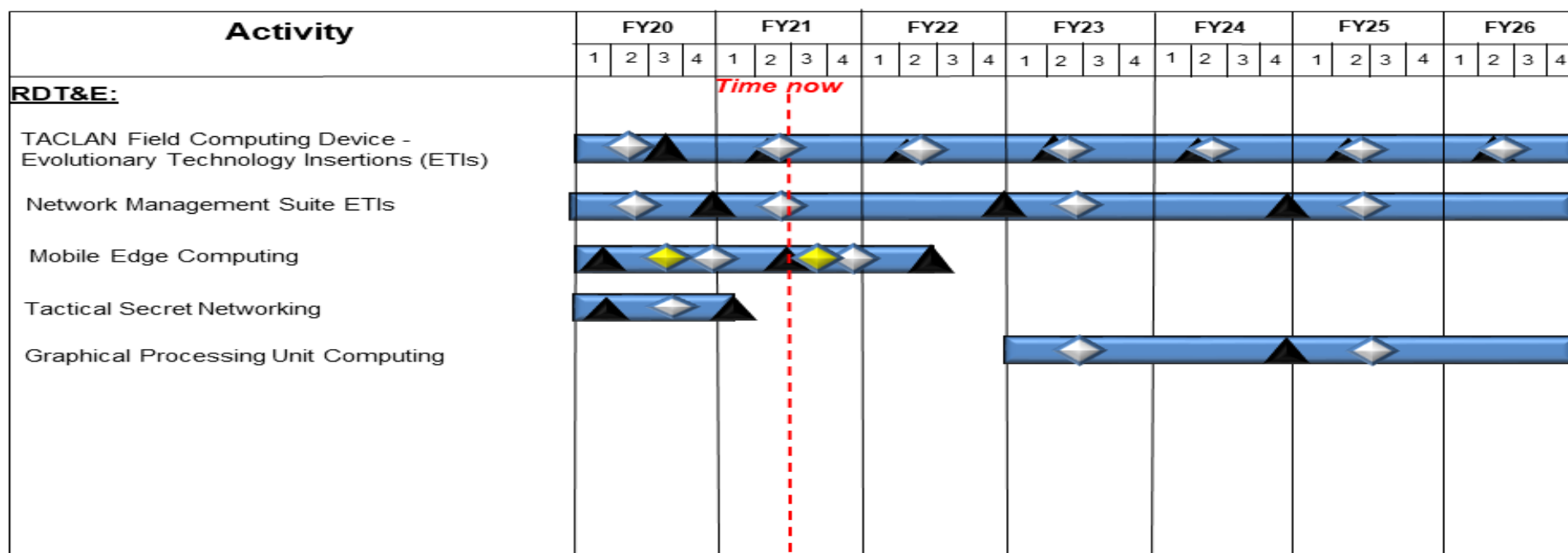
Date: May 2021




Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S710 / Tactical Systems Development

# Tactical Local Area Network (TACLAN) Schedule



 FOC
  Award
  Article Delivery
  RDT&E
  Procurement
  O&M
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

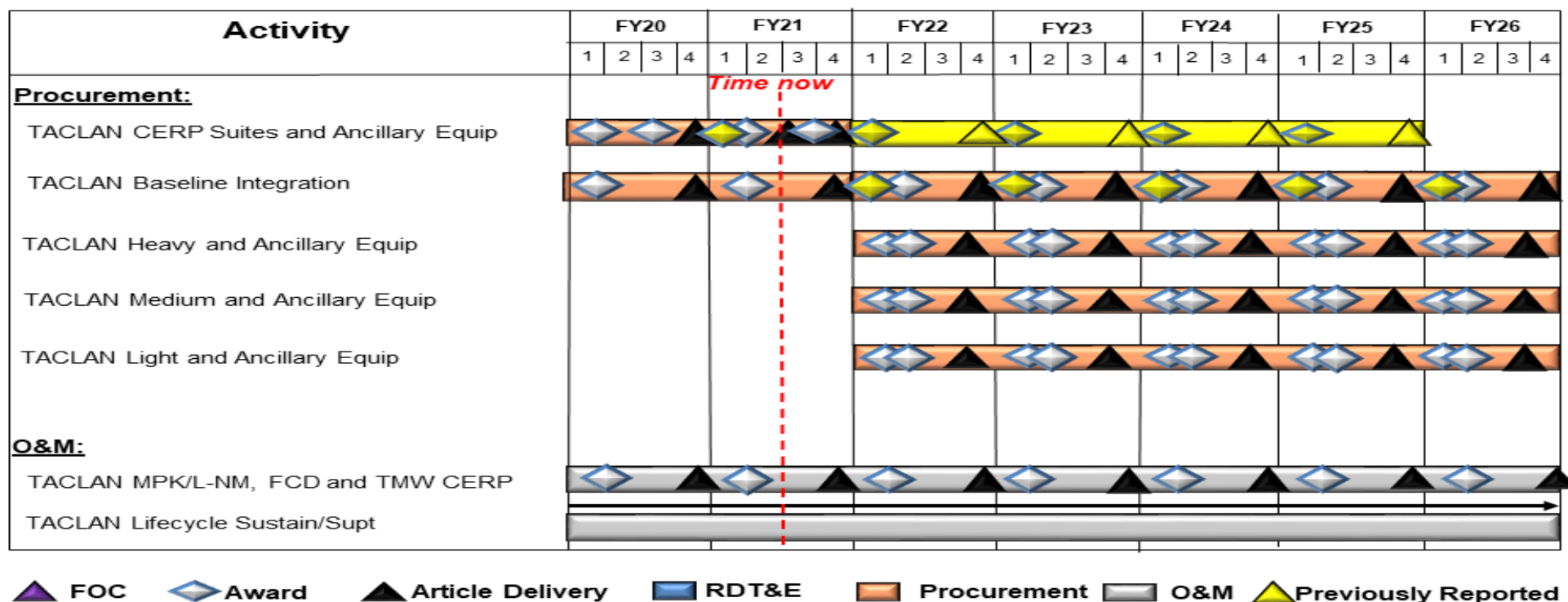
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S710 / Tactical Systems Development

## TACLAN Schedule (con't)



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> S710 / <i>Tactical Systems Development</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Tactical Local Area Network (TACLAN) Suites</i></b>				
TACLAN Field Computing Device (FCD) Upgrades	1	2020	4	2026
Network Management Suite ETIs	1	2020	4	2026
Mobile Edge Computing	1	2020	2	2022
Tactical Secret Networking	1	2020	1	2021
Graphical Processing Unit Computing	1	2023	4	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S725 / Tactical Radio Systems			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S725: Tactical Radio Systems	32.835	10.627	7.940	2.999	-	2.999	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project is for the development of all Special Operations Forces (SOF) tactical radio programs. Tactical Radios provide the critical Command, Control, and Communications (C3) link between SOF Commanders and SOF Teams conducting operational missions and training exercises. They also provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies, and allied foreign forces. Tactical Radios rapidly and seamlessly establish and maintain mobile and fixed Command and Control (C2) communications between operational elements and higher echelon headquarters, allowing SOF to operate with any force combination in multiple environments.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> SOF Tactical Communications (STC)	9.961	7.253	1.791
<b>Description:</b> STC consists of Next-Generation SOF Communication Systems which replace most of the currently fielded SOF tactical radios. Capabilities include Real Time, Hostile and Friendly Force Information; Line of Sight (LOS) and Beyond LOS (BLOS) Communications; and access to Situational Awareness in the form of Intelligence Inputs, Broadcasts, and Networks.			
<b>FY 2021 Plans:</b> Complete A-Tactical Assault Kit development and integration. Continue Software Development Kit (SDK) Mission Module (MM) development. Begin High Throughput (HT) MM development and integration that will provide high throughput capability to existing Mobile Ad-hoc Networks (MANET). Continue Engineering Change Proposals (ECP) for Next Generation Handheld (NGHH) and Next Generation Manpack (NGMP). Complete NGMP user assessments. Continue High Frequency (HF) platform modernization incorporating two systems into a single Government-owned form factor that provides Low Probability Intercept/Detection (LPI/D) capabilities. Complete Line of Sight (LOS)/Below LOS contested communications/waveform development.			
<b>FY 2022 Plans:</b> Completes the second phase of development for the SDK MM and HT MM that will provide high throughput capability to existing MANET. Continues ECPs for the NGHH and NGMP, to include development of a Wide-Area Personal Area Network to reduce tactical radio footprints through the use of wireless technologies. Continues HF platform modernization incorporating two systems into a single Government-owned form factor that provides LPI/D capabilities. Begins next phase of contested communications/ waveform development focusing on anti-jam capabilities.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$5.462 million is due to completion of HF Modernization and MM development.			
<b>Title:</b> Blue Force Tracking (BFT)	0.666	0.687	1.208

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> <i>S725 / Tactical Radio Systems</i>	

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<p><b>Description:</b> BFT is a family of devices used to remotely track and monitor SOF unit personnel. The capability enhances C2, threat warning, force protection, situational awareness, combat search and rescue, counter-fratricide, and battlefield visualization. This capability is unique to SOF because it requires the devices to be lightweight, portable, secure with a Low Probability of Intercept/Low Probability of Detection.</p> <p><b>FY 2021 Plans:</b> Continue development and test of new capabilities in BFT equipment.</p> <p><b>FY 2022 Plans:</b> Continues development and testing of new capabilities as outlined in the BFT Capability Development Document.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.521 million is due to addressing capability enhancements outlined in the latest Capability Development Document version.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	10.627	7.940	2.999

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PROC/0204WARRIOR: <i>Warrior Systems&lt;\$5M</i>	344.003	342.606	284.548	-	284.548	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

- STC is a Commercial-Off-The-Shelf (COTS)/Non-Development Item program with Evolutionary Technology Insertions. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- BFT is a fielded program with evolutionary technology insertions leveraging commercial and other government agency sources for required certifications, functional and operational tests, and technology updates.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S725 / Tactical Radio Systems					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOF Tactical Communications (STC) Radio Development	MIPR	Various : Various	27.560	9.961	Feb 2020	7.253	Mar 2021	1.791	Dec 2021	-		1.791	Continuing	Continuing	-
Blue Force Tracking (BFT) Rapid Prototyping, Product Development, and Device Integration	MIPR	Various : Various	2.462	0.591	Nov 2019	0.612	Nov 2020	1.133	Nov 2021	-		1.133	Continuing	Continuing	-
Subtotal			30.022	10.552		7.865		2.924		-		2.924	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
STC Testing	Option/ TBD	Various : Various	2.681	-		-		-		-		-	0.000	2.681	-
BFT SOF Assessment & Operational Testing	MIPR	Various : Variuos	0.132	0.075	Nov 2019	0.075	Nov 2020	0.075	Nov 2021	-		0.075	Continuing	Continuing	-
Subtotal			2.813	0.075		0.075		0.075		-		0.075	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			32.835	10.627		7.940		2.999		-		2.999	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

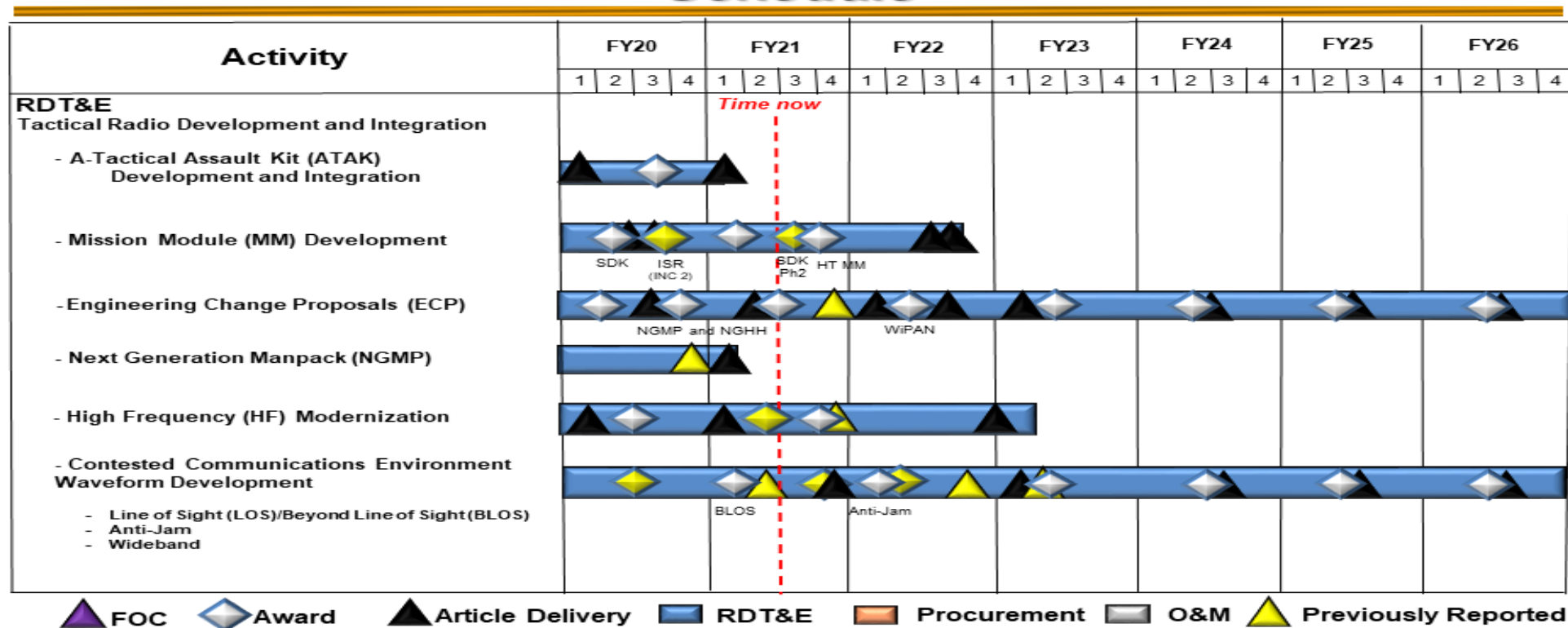
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S725 / Tactical Radio Systems

## SOF Tactical Communications (STC)/ Next Generation Tactical Communications (NGTC) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

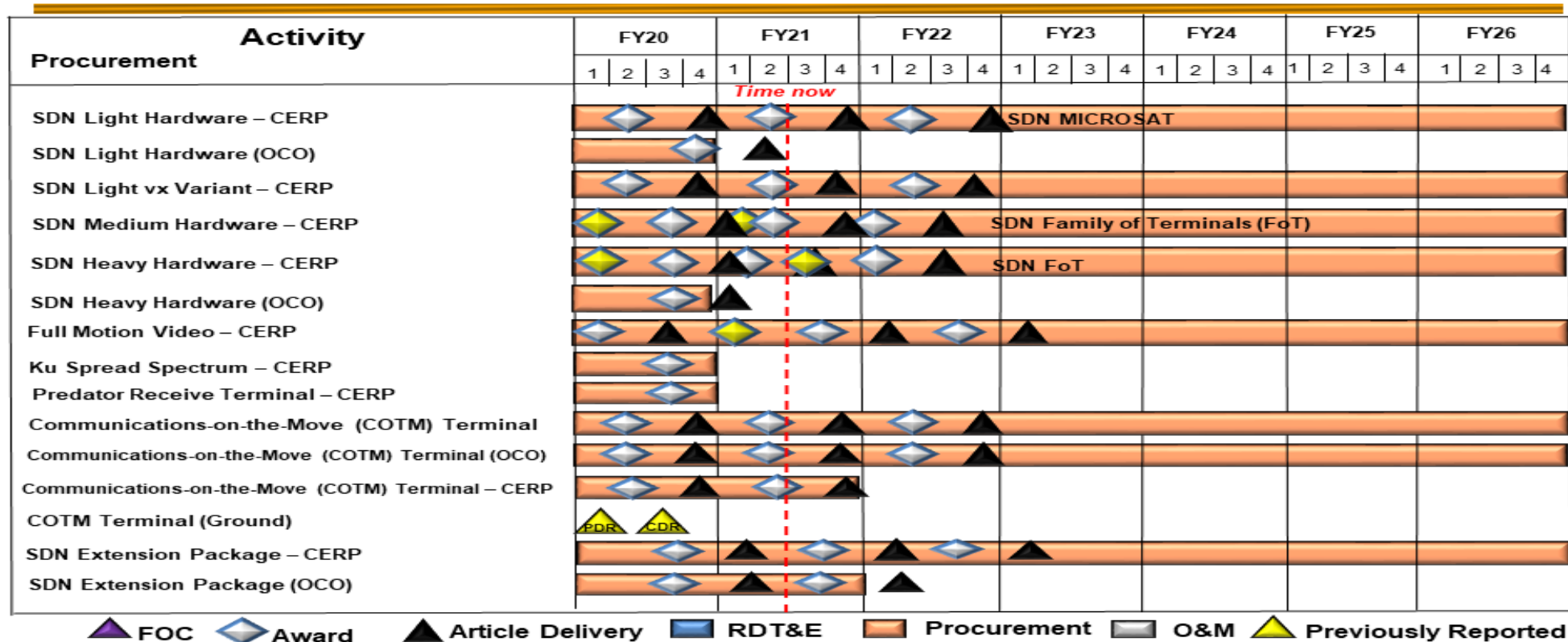
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S725 / Tactical Radio Systems

## SDN Schedule (con't)





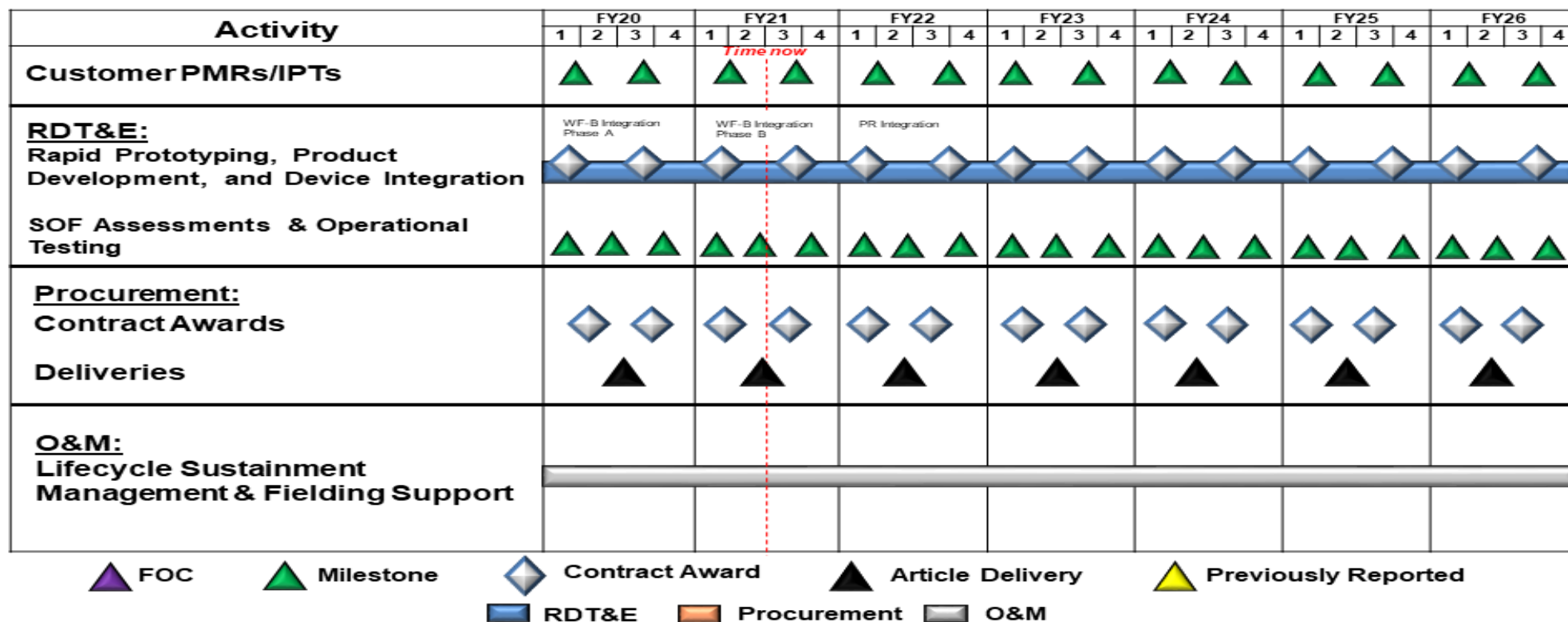
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Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

Appropriation/Budget Activity  
0400 / 7R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior SystemsProject (Number/Name)  
S725 / Tactical Radio Systems

# Blue Force Tracking Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> <i>S725 / Tactical Radio Systems</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>SOF Tactical Communications Radio</i></b>				
A-Tactical Assault Kit (ATAK) Development and Integration	1	2020	1	2021
Mission Module (MM) Development	1	2020	3	2022
Engineering Change Proposals (ECPs)	1	2020	4	2026
Next Generation (NGEN) Manpack (MP) Test and Evaluation	1	2020	1	2021
High Frequency (HF) Modernization	1	2020	1	2023
Contested Communications	1	2020	4	2026
<b><i>Blue Force Tracking</i></b>				
Rapid Prototyping, Product Development, and Device Integration	1	2020	4	2026
SOF Assessment & Operational Testing	1	2020	4	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S800 / Munitions Advanced Development			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S800: Munitions Advanced Development	95.396	21.129	5.994	21.768	-	21.768	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project funds advanced engineering, operational system development and qualification efforts related to specialized munitions and equipment to meet the unique requirements of SOF.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2020	FY 2021	FY 2022	
Title: Stand-Off Precision Guided Munitions (SOPGM)									-	3.155	4.256	
Description: SOPGM provides for the integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms. This project received a congressional add in FY 2020.												
FY 2021 Plans: Continue engineering, integration and test on Small Glide Munitions (SGM).												
FY 2022 Plans: Continues the engineering, integration and testing on various technologies (munitions and warheads) within the precision guided munitions portfolio.												
FY 2021 to FY 2022 Increase/Decrease Statement: Increase of \$1.101 million will continue SOPGM integration/development efforts.												
Title: Munitions Advanced Development									0.569	0.549	1.549	
Description: The Munitions Advanced Development program provides for Insensitive Munitions (IM) technology development and evaluations that allow SOF munitions to pass testing which includes bullet impact, sympathetic detonation, fast cook off, slow cook off and shaped charge test. Testing is in accordance with the United States Special Operations IM Testing Plan. Munitions product improvements are tested in accordance with command priorities.												
FY 2021 Plans: Continue proof of concept development and IM testing on various munitions. Continue full scale testing to satisfy safety requirements in Military Standard 2105C (Department of Defense Test and Method Standard: Hazard Assessment Test for Non-Nuclear Munitions, 26 Sep 2006).												
FY 2022 Plans:												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7		<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>		<b>Project (Number/Name)</b> S800 / <i>Munitions Advanced Development</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Continues proof of concept development and IM testing on various munitions. Continues full scale testing to satisfy safety requirements in Military Standard 2105C (Department of Defense Test and Method Standard: Hazard Assessment Test for Non-Nuclear Munitions, 26 Sep 2006). Scalable Effects effort funding will enable developmental testing, initial operational test evaluations, and finalized safety certifications for operational approvals. Additional detail provided under separate cover.					
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$1.000 million is due to new Maritime Disablement Operations (MDO) requirement and complimentary efforts. These programs require development, testing, safety classification and analyses, and validation before fielding. Additional details provided under separate cover.					
<b>Title:</b> Maritime Precision Engagement Munition (MPE-M) Ground Organic Precision Strike System (GOPSS)  <b>Description:</b> Guided Rocket or propeller Systems provides for the engineering, integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms. MPE-M GOPSS is designated a Middle Tier Acquisition (MTA) program which uses the rapid prototyping pathway and is executing using existing contracts, government agencies, and new contracts competitively selected as appropriate.  <b>FY 2021 Plans:</b> Continue the engineering, integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms.  <b>FY 2022 Plans:</b> Enables continued development of MPE-M by funding the following: engineering services; munition magazines; munition aircraft, launchers, and payloads; control systems; system emulators; test and evaluation events to include range time and support, testing materials, and equipment; post-event processing with revised capability and programmatic documents. These efforts will generate a Critical Design Review package and prepare the MPE-M program for fleet safety certifications, Developmental and Operational Assessments, and production. Enables development of each echelon within the GOPSS through funding the following: integration of missile launcher onto mobile platforms; purchase of developmental test articles and test equipment, test and evaluation events to include range costs; performance of critical munitions safety assessments; post-event processing and analysis with revised capability and programmatic documents;. All of this will prepare GOPSS for Critical Design Review milestone packages and prepare the GOPSS program for weapons safety certifications, Developmental and Operational Assessments, and production.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b>			7.989	2.290	15.963

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command								<b>Date:</b> May 2021			
<b>Appropriation/Budget Activity</b> 0400 / 7				<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>			<b>Project (Number/Name)</b> S800 / <i>Munitions Advanced Development</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>								<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	
Increase of \$13.673 million is for design configuration development, testing and evaluation, improvement, and subsequent Critical Design Review milestone activity and will also enable the integration of MPE-M with the Naval Special Warfare Combatant Craft Medium (CCM) platform and subsequent weapon system safety certification.											
<b>Accomplishments/Planned Programs Subtotals</b>								8.558	5.994	21.768	
								<b>FY 2020</b>	<b>FY 2021</b>		
<b>Congressional Add:</b> SOPGM								12.571	-		
<b>FY 2020 Accomplishments:</b> Continued SGM Unmanned Aerial System (UAS) integration (\$2.901 million) and began SGM collaborative strike enhancement (\$9.670 million) for SOPGM.											
<b>Congressional Adds Subtotals</b>								12.571	-		
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/0203ORDN: <i>Ordnance Items &lt;\$5M</i>	402.899	289.652	168.072	-	168.072	-	-	-	-	-	-
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
SOPGM: Integration and developmental testing of precision guided munitions will be conducted using government laboratories or industry partners depending on the munitions for various SOF platforms.											
Munitions Advanced Development: Munitions and packaging redesign shall take place within government laboratories, as well as in industry, depending on the munitions. IM solutions shall be tested on a small scale for proof of principle. Planned product improvements are tested at Army, Navy, and Air Force test centers leveraging mid-tier acquisition authorities and Other Transaction Authorities (OTAs).											
MPE-M/GOPSS: Integration and developmental testing of precision strike systems with follow-on government-led integration effort leveraging lessons learned from similar rapid integration and prototype efforts on other SOF platforms.											

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**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>	<b>Project (Number/Name)</b> S800 / <i>Munitions Advanced Development</i>
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Stand-off Precision Guided Munitions (SOPGM) Development	SS/ Various	Various : Various	-	-		3.155	Feb 2021	3.756	Mar 2022	-		3.756	Continuing	Continuing	-
SOPGM Small Glide Munitions (SGM)/MQ-9 Integration Congressional Plus Up	C/Various	Dynetics : AL	5.900	1.661	Feb 2020	-		-		-		-	0.000	7.561	-
SOPGM SGM Collaborative Strike Enhancement Congressional Plus Up	C/Various	Dynetics : AL	-	8.128	Feb 2020	-		-		-		-	0.000	8.128	-
Maritime Precision Engagement Munition (MPE-M) Aircraft Development	C/Various	Various : Various	0.400	4.323	Nov 2020	0.500	Nov 2020	9.850	Nov 2021	-		9.850	Continuing	Continuing	-
MPE-M - Payload development	C/Various	Various : Various	-	1.010	Dec 2020	-		1.200	Nov 2021	-		1.200	Continuing	Continuing	-
MPE-M Integration Development	C/Various	Various : Various	1.350	0.500	Aug 2020	1.000	Nov 2020	0.956	Nov 2021	-		0.956	Continuing	Continuing	-
Ground Organic Precision Strike System (GOPSS)	C/Various	Various : Various	-	2.067	Jan 2021	-		1.775	Nov 2021	-		1.775	Continuing	Continuing	-
Prior Year Funding - Base	C/Various	Various : Various	57.426	-		-		-		-		-	0.000	57.426	-
Prior Year Funding - Overseas Contingency Operations (OCO)	C/Various	Various : Various	0.002	-		-		-		-		-	0.000	0.002	-
Prior Year Funding - Congressional Plus Up	C/Various	Various : Various	8.268	-		-		-		-		-	0.000	8.268	-
<b>Subtotal</b>			73.346	17.689		4.655		17.537		-		17.537	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year	C/Various	Various : Various	1.100	-		-		-		-		-	0.000	1.100	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S800 / Munitions Advanced Development					
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Funding - OCO	C/Various	Various : Various	0.001	-		-		-		-		-	0.000	0.001	-
Prior Year Funding - Congressional Plus Up	C/Various	Various : Various	7.868	-		-		-		-		-	0.000	7.868	-
Subtotal			8.969	-		-		-		-		-	0.000	8.969	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOPGM SGM/MQ-9 Integration Congressional Plus up	C/Various	Dynetics : AL	-	1.240	May 2020	-		-		-		-	0.000	1.240	-
SOPGM SGM Collaborative Strike Enhancement Congressional Plus Up	C/Various	Dynetics : AL	-	1.542	May 2020	-		-		-		-	0.000	1.542	-
SOPGM Development	C/Various	Various : Various	-	-		-		0.500	Feb 2022	-		0.500	Continuing	Continuing	-
Munitions - Insensitive Munitions (IM) Evaluation	C/FFP	US Air Force Air Armaments Center : Eglin, AFB, FL	0.164	0.058	Dec 2019	0.060	Dec 2020	0.067	Dec 2021	-		0.067	Continuing	Continuing	-
Munitions - IM Testing	Allot	ARDEC : Picatinny Arsenal, NJ	0.840	0.363	Dec 2019	0.267	Dec 2020	0.268	Dec 2021	-		0.268	Continuing	Continuing	-
Munitions Advanced Development - Obtain Munitions Test Articles	C/FFP	General Dynamics : Canada	0.334	0.148	Dec 2019	0.222	Dec 2020	1.214	Dec 2021	-		1.214	Continuing	Continuing	-
MPE-M - Safety	Allot	NSWC : Indian Head, MD	0.300	0.089	Aug 2020	0.159	Jun 2021	0.419	Nov 2021	-		0.419	Continuing	Continuing	-
MPE-M - Payload Test	Allot	Redstone : Various	0.450	-		0.631	May 2021	0.468	Feb 2022	-		0.468	Continuing	Continuing	-
MPE-M - Test Ranges	Allot	NSWC : Indian Head, MD	-	-		-		1.295	Feb 2022	-		1.295	Continuing	Continuing	-
Prior Year Funding - Base	C/Various	Various : Various	2.313	-		-		-		-		-	0.000	2.313	-
Prior Year Funding - OCO	C/Various	Various : Various	0.406	-		-		-		-		-	0.000	0.406	-

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2022 United States Special Operations Command												<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7						<b>R-1 Program Element (Number/Name)</b> PE 1160431BB / <i>Warrior Systems</i>				<b>Project (Number/Name)</b> S800 / <i>Munitions Advanced Development</i>				

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022 Base</b>		<b>FY 2022 OCO</b>		<b>FY 2022 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Prior Year Funding - Congressional Plus Up	C/Various	Various : Various	8.274	-		-		-		-		-	0.000	8.274	-
<b>Subtotal</b>			13.081	3.440		1.339		4.231		-		4.231	Continuing	Continuing	N/A

	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	95.396	21.129		5.994		21.768	-	21.768	N/A

**Remarks**



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

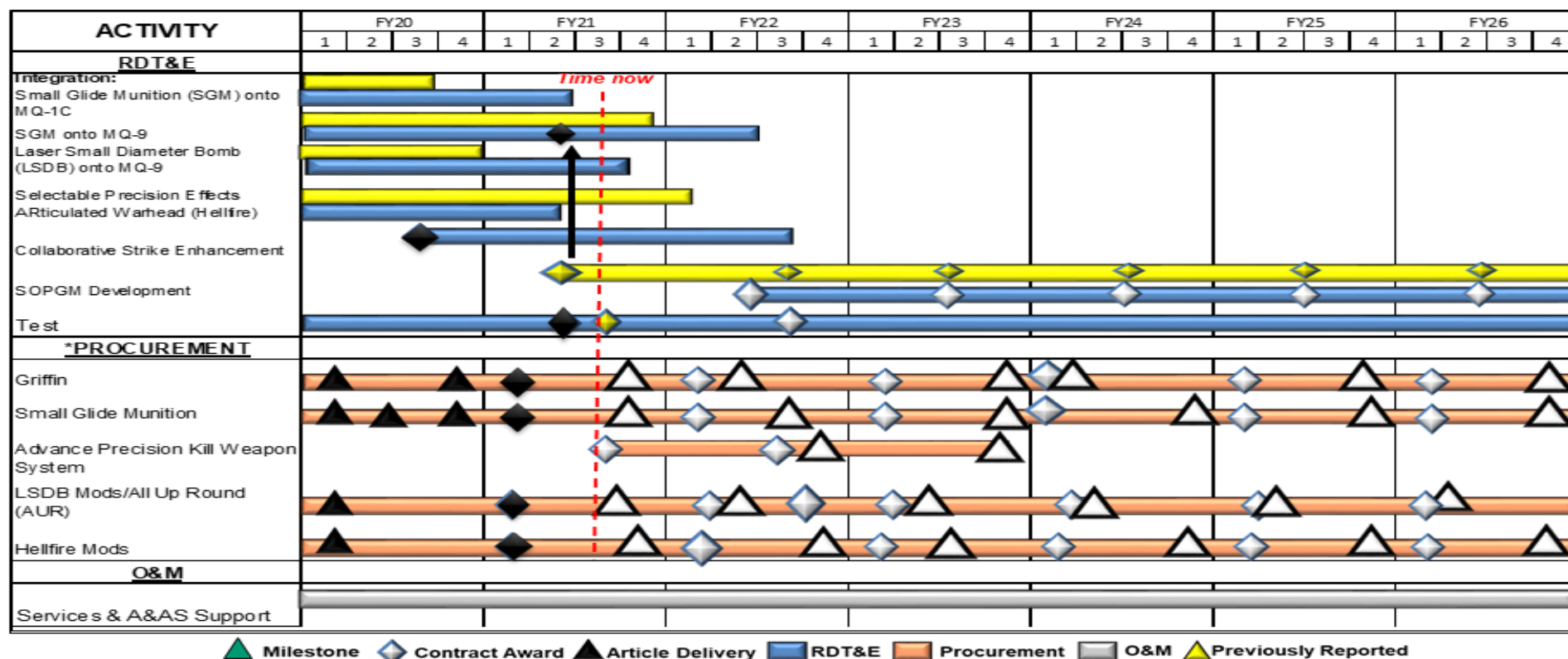
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160431BB / Warrior Systems

Project (Number/Name)  
S800 / Munitions Advanced Development

# Stand-Off Precision Guided Munitions Schedule



\*Articles delivered monthly

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

Date: May 2021

Appropriation/Budget Activity

0400 / 7

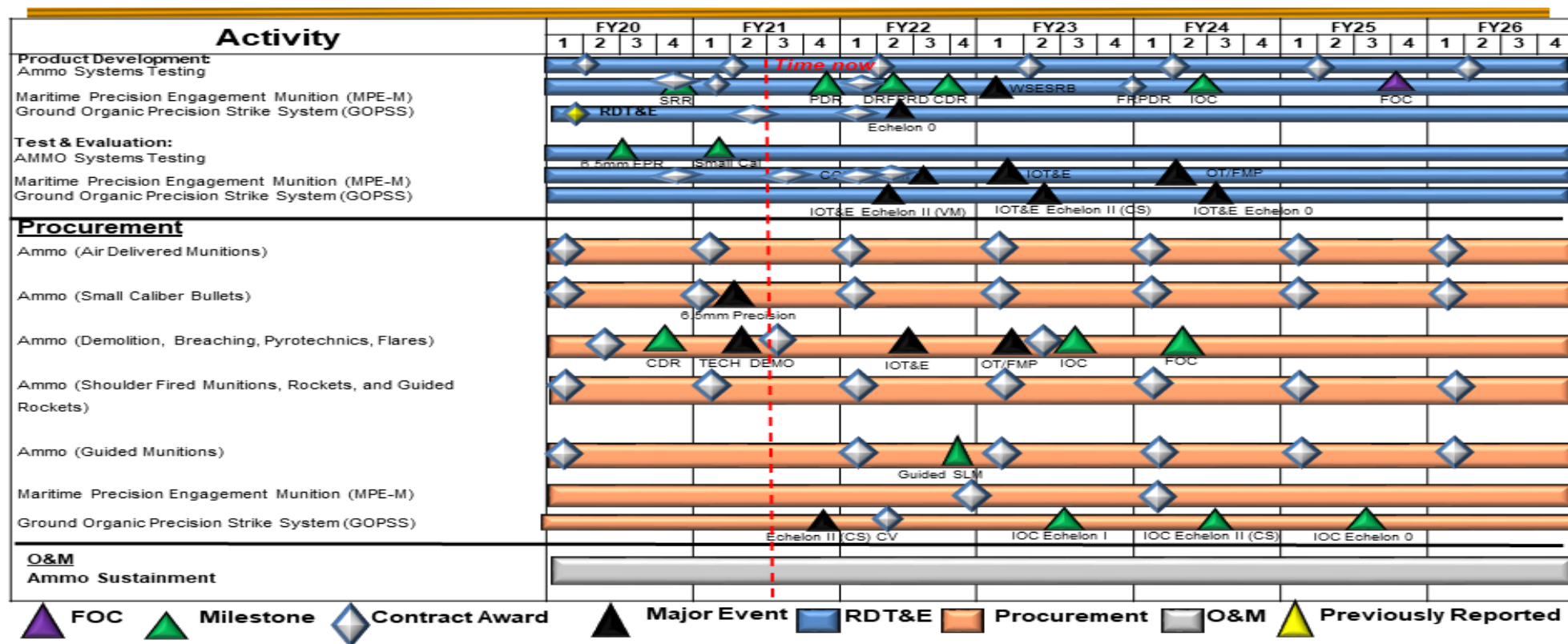
R-1 Program Element (Number/Name)

PE 1160431BB / Warrior Systems

Project (Number/Name)

S800 / Munitions Advanced Development

## Munitions (Ordnance Items <\$5M) Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S800 / Munitions Advanced Development	

## Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Stand-off Precision Guided Munitions (SOPGM)</b>				
Small Glide Munitions (SGM) onto MQ-1C Integration	1	2020	2	2021
SGM onto MQ-9 Integration	1	2020	2	2022
Laser Small Diameter Bomb (LSDB) onto MQ-9 Integration	1	2020	3	2021
Selectable Warhead Hellfire (HF) Integration	1	2020	2	2021
SGM Collaborative Strike Enhancement	3	2020	3	2022
SOPGM Development	2	2022	4	2026
SOPGM Testing	1	2020	4	2026
<b>Munitions (Ordnance Items)</b>				
Ammo Systems Product Development	1	2020	4	2026
Maritime Precision Engagement Munition (MPE-M) Product Development	1	2020	4	2026
Ground Organic Precision Strike System (GOPSS) Product Development	1	2020	4	2026
Ammo Systems Test and Evaluation	1	2020	4	2026
MPE-M Test and Evaluation	1	2020	4	2026
GOPSS Test and Evaluation	1	2020	4	2026

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 1160432BB / <i>Special Programs</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	33.449	19.357	7.494	6.486	-	6.486	-	-	-	-	-	-
S500E: <i>Special Programs</i>	33.449	19.357	7.494	6.486	-	6.486	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This project is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	21.005	10.500	10.510	-	10.510
Current President's Budget	19.357	7.494	6.486	-	6.486
Total Adjustments	-1.648	-3.006	-4.024	-	-4.024
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-3.006			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.748	-			
• Realignment	-0.900	-	-	-	-
• Other Adjustments	-	-	-4.024	-	-4.024

**Change Summary Explanation**

Funding:

FY 2020: Net decrease of \$1.648 million is due to a transfer of funds to Small Business Innovative Research/Small Business Technology Research Transfer programs (SBIR/STTR) (\$0.748 million), details are provided under separate cover (\$0.900 million).

FY 2021: Net decrease of \$3.006 million details are provided under separate cover.

FY 2022: Decrease of \$4.024 million details are provided under separate cover.

Schedule: None.

Technical: None.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 1160434BB / <i>Unmanned ISR</i>											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	98.627	42.457	17.154	18.006	-	18.006	-	-	-	-	-	-
S855: <i>Unmanned ISR</i>	98.627	42.457	17.154	18.006	-	18.006	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

NOTE: Unmanned Intelligence, Surveillance, and Reconnaissance (ISR) includes the consolidation of Special Applications for Contingencies (SAFC) (previously Program Element (PE) 0304210BB); MQ-1 Unmanned Aerial Vehicle (UAV), (previously PE 0305219BB); MQ-8, (previously PE 0305231BB); RQ-11, UAV (previously PE 1105232BB); and RQ-7 UAV, (previously PE 1105233BB).

This program element is part of the Military Intelligence Program (MIP). Unmanned ISR rapidly develops and deploys special capabilities to perform ISR for deployed Special Operations Forces (SOF) using non-traditional means. United States Special Operations Command (USSOCOM) has been designated as the Department of Defense lead for planning, synchronizing, and as directed, executing global operations against terrorist networks and targets. USSOCOM requires the capability to find, fix, and finish time-sensitive high-value fixed and fleeting targets at the unit and team level without placing personnel and units in harm's way. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This PE addresses the primary areas of ISR and Targeting capabilities for SOF. These technologies will be pursued via rapid prototyping efforts when appropriate.

FY 2020 funding totals include \$5.000 million appropriated for Overseas Contingency Operations.

FY 2021 funding totals include \$3.000 million appropriated for Overseas Contingency Operations.

FY 2022 funding totals include \$18.006 million Base with \$0.000 million Direct War and \$5.000 million for Enduring Costs.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	42.377	24.154	22.252	-	22.252
Current President's Budget	42.457	17.154	18.006	-	18.006
Total Adjustments	0.080	-7.000	-4.246	-	-4.246
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-7.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	0.080	-	-4.246	-	-4.246

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR	
<p><b><u>Change Summary Explanation</u></b></p> <p>Funding:</p> <p>FY 2020: Decrease of \$0.080 million was made available to support emerging Command requirements in the year of execution.</p> <p>FY 2021: Decrease of \$7.000 million was due to a Congressionally directed reduction due to under execution.</p> <p>FY 2022: Decrease of \$4.246 million is due to the planned shift of Automation, Autonomy, Architecture and Integration (A3I) support from SOF to Service.</p> <p>Schedule: None.</p> <p>Technical: None.</p>		



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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>				Project (Number/Name) S855 / <i>Unmanned ISR</i>			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S855: <i>Unmanned ISR</i>	98.627	42.457	17.154	18.006	-	18.006	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project is part of the Military Intelligence Program (MIP). It rapidly develops and deploys special capabilities to perform Intelligence, Surveillance, and Reconnaissance (ISR) for deployed Special Operations Forces (SOF) using non-traditional means.

Group 1, 2, 3 and 4, Unmanned Aerial Systems (UAS) developmental efforts are to identify, develop, integrate, and test SOF-unique mission kits, mission payloads, air vehicle enhancements, and modifications to ground control stations. Based on stakeholder input and requirements, Special Applications for Contingencies (SAFC) develops and integrates UAS payloads to advance ISR capabilities that address dynamic and emergent operational needs of the SOF user. Efforts include improving imagery intelligence and electronic warfare payloads, capitalizing on developing technologies to reduce size, weight and power while addressing processing and data management challenges. This program also provides a mechanism for SOF user combat evaluation of emerging sensor technologies.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> SAFC	22.356	7.365	4.862
<p><b>Description:</b> SAFC's evolutionary development projects quickly provide integrated, SOF-unique mission kits, mission payloads, air vehicle enhancements and ground control station upgrades to its user community. These efforts rapidly develop and integrate UAS air vehicles, payloads and other technologies to field ISR capabilities and address dynamic and emergent operational needs and vulnerabilities of the SOF user. Efforts include improving imagery intelligence and electronic warfare payloads, capitalizing on developing technologies to reduce size, weight and power while addressing processing and data management challenges. It also provides a mechanism for SOF user combat evaluation of emerging sensor technologies. SAFC applies focused Research &amp; Development (R&amp;D) for relatively low cost solutions to provide short lead-time contingency planning requirements where focused R&amp;D will allow for test and evaluation of leading edge solutions to emergent problem sets.</p> <p><b>FY 2021 Plans:</b> Continue development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short-notice requirements. Continue evaluation of unique sensor technologies, persistent stare and quick reaction systems.</p> <p><b>FY 2022 Plans:</b> Continues development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short-notice requirements. Continues evaluation of unique sensor technologies, persistent stare and quick reaction systems.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b></p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7		<b>R-1 Program Element (Number/Name)</b> PE 1160434BB / <i>Unmanned ISR</i>		<b>Project (Number/Name)</b> S855 / <i>Unmanned ISR</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Decrease of \$2.503 million is due to a reduction in development, integration, evaluation, and miniaturization capability into SOF Small Unmanned Aerial Systems (SUAS).					
<b>Title:</b> Expeditionary Organic Tactical Airborne ISR Capability Set (EOTACS) <b>Description:</b> EOTACS systems are less than 55 pounds in weight and include fixed wing, Vertical Takeoff and Landing, and tethered platforms. Provides for rapid development and prototyping efforts to identify, develop, integrate, and test SOF-unique mission kits. Leverage SAFC development efforts. <b>FY 2021 Plans:</b> Group 1 UAS funding is incorporated into the EOTACS program starting in FY 2020. Continue integration and testing of SOF-unique mission kits, mission payloads, and modifications to the small tactical UAS and ground control station, to include but not limited to: improved capabilities for geo-location, collection of push-to-talk, communications, specialized tagging, tracking, and locating, and enhanced communications relay and work to miniaturize previously developed payloads. <b>FY 2022 Plans:</b> Continues integration and testing of SOF unique mission kits, mission payloads, and modifications to the small tactical UAS and ground control station, to include but not limited to: improved capabilities for geo-location, collection of push-to-talk, communications, specialized tagging, tracking, and locating, and enhanced communications relay and work to miniaturize previously developed payloads. <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.006 million is to continue integration and testing of SOF unique mission kits, mission payloads and modifications to the small tactical UAS and ground control station.			0.279	0.283	0.289
<b>Title:</b> Multi-Mission Tactical Unmanned Aerial Service (MTUAS) <b>Description:</b> MTUAS are medium tactical systems, between 21 pounds and 55 pounds in weight. Identifies, develops, integrates, and tests SOF-unique mission kits, payloads, aircraft and ground control station modifications. <b>FY 2021 Plans:</b> Continue integration and testing of SOF-unique mission capabilities to meet new medium tactical UAS requirements, to include but not limited to: signals intelligence gathering, full motion video, geo-location, communications relay, Global Positioning System (GPS) anti-jam technology, and decreased footprint. Additionally, acquires test articles for planned upgrades. Award contract for future materiel solution to meet updated requirements. <b>FY 2022 Plans:</b> Continues integration and testing of SOF-unique mission capabilities to meet new medium tactical UAS requirements, to include but not limited to: signals intelligence gathering, full motion video, geo-location, communications relay, GPS anti-jam technology,			7.854	3.489	5.748

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7		<b>R-1 Program Element (Number/Name)</b> PE 1160434BB / <i>Unmanned ISR</i>		<b>Project (Number/Name)</b> S855 / <i>Unmanned ISR</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
and decreased footprint. Continues development and improvement of new platform material solution in order to meet updated requirements.					
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$2.259 million is due to a need for further development of the future MTUAS platform in order to meet program's updated requirements.					
<b>Title:</b> Group 3 UAS			5.000	3.000	6.015
<b>Description:</b> Group 3 UAS are systems, between 55 pounds and 1320 pounds in weight. Identifies, develops, integrates, and tests SOF-unique mission kits, payloads and ground control station modifications.					
<b>FY 2021 Plans:</b> Continue development and integration of SOF unique payloads and mission kits for use on the service provided RQ-21A Blackjack UAS. Focus areas in development include integration of signals intelligence payloads, reduction in ground station kit size, and operating independent of GPS.					
<b>FY 2022 Plans:</b> Continues development and integration of SOF unique payloads and mission kits for use on the service provided RQ-21A Blackjack UAS. Focus areas in development include integration of signals intelligence payloads, reduction in ground station kit size, and operating independent of GPS.					
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$3.015 million is due to requirements for further SOF unique payload development and improvement.					
<b>Title:</b> Group 4 UAS			6.968	3.017	1.092
<b>Description:</b> Group 4 UAS are large systems that weigh greater than 1,320 pounds and fly higher than flight level 180. Provides for development efforts to identify, develop, integrate, and test SOF-unique mission kits.					
<b>FY 2021 Plans:</b> Develop, test, and integrate SOF peculiar emerging technology mission kits, mission payloads, weapons, and modification on MQ-1C UAVs, Ground Control Stations (GCS), and training systems.					
<b>FY 2022 Plans:</b> Develops, tests, and integrates SOF peculiar emerging technology mission kits, mission payloads, weapons, and modification on MQ-1C UAVs, Ground Control Stations (GCS), and training systems.					
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160434BB / <i>Unmanned ISR</i>	<b>Project (Number/Name)</b> S855 / <i>Unmanned ISR</i>	

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Decrease of \$1.925 million reflects the planned shift of Automation, Autonomy, Architecture and Integration (A3I) support from SOF to Service.			
<b>Accomplishments/Planned Programs Subtotals</b>	42.457	17.154	18.006

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PROC/0201UMNISR: <i>Unmanned ISR</i>	19.955	32.695	55.951	-	55.951	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

SAFC acquisition strategy is evolutionary and spiral-based for technology insertion and low volume procurement. SAFC utilizes existing competed contract vehicles to the maximum extent possible for minor development, integration and modification of Government-Off-The-Shelf (GOTS)/Commercial-Off-The-Shelf (COTS) equipment. Utilizes limited/full and open competition contracts and rapid acquisition tools for major developments.

EOTACS is an evolutionary acquisition program that delivers, integrates, and qualifies SOF-unique mission kits, mission payloads, air vehicle enhancements, and ground control station upgrades. These capabilities are defined through a thorough stakeholder's analysis in order to provide well and broadly defined capabilities. Contracting methods depend on the type of development effort. Competitive source selection will be conducted as much as possible. Proprietary considerations may direct some effort to the Original Equipment Manufacturer (OEM).

MTUAS uses evolutionary acquisition solutions that deliver, integrate, and qualify SOF-unique modular mission kits that may include: mission payloads, air vehicle enhancements, training systems, and ground control station upgrades. These capabilities are defined through available acquisition strategy that includes a thorough stakeholder's analysis to provide well and broadly defined capabilities. Contracting methods depend on the type of development effort. Competitive source selection will be conducted as much as possible but may also leverage Other Transactional Authorities (OTAs) when sensible. Proprietary considerations may direct some effort to the OEM on a sole source basis.

Group 3 UAS are evolutionary acquisition projects that deliver, integrate, and qualify SOF-unique mission kits, mission payloads, air vehicle enhancements, and ground control station upgrades. These capabilities are defined through a thorough stakeholder's analysis in order to provide well and broadly defined capabilities. Contracting methods depend on the type of development effort. Competitive source selection will be conducted as much as possible. Proprietary considerations may direct some efforts to the OEM.

Group 4 UAS is an evolutionary acquisition program that develops, tests, and integrates SOF peculiar emerging technology mission kits, mission payloads, weapons, and modifications on MQ-1C UAVs, GCS, and training systems. Group 4 UAS provides rapid prototype activities and technology maturation events to increase

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command		Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR	Project (Number/Name) S855 / Unmanned ISR
<p>situational awareness and lethality. Contract types include a mix of cost type and fixed price. Proprietary issues with the aircraft and GCS software as well as aircraft modification may require sole source contracting to the original equipment manufacturer. Group 4 UAS leverages service common Contractor Logistics Support (CLS) and developmental activities and contracts for aircraft and ancillary equipment development, improvement, and sustainment.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>				Project (Number/Name) S855 / <i>Unmanned ISR</i>					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Special Applications for Contingencies (SAFC) Platform/Payload Development and Integration	MIPR	Various; Various : Various	7.715	0.706	Jan 2020	4.570	Dec 2020	3.157	Dec 2021	-		3.157	Continuing	Continuing	-
SAFC - NAVSEA / JHU / APL	C/Various	JHU/ APL : Various	3.558	4.000	Nov 2019	-		-		-		-	0.000	7.558	-
SAFC - NIWC: Beyond Line of Sight (BLOS) Laser Mod Payload Auto Target Recognition Development and Integration	C/Various	Various : Various	1.020	2.100	Feb 2020	-		-		-		-	0.000	3.120	-
SAFC Naval Air Warfare Center Aircraft Division (NAWC - AD)	C/Various	Various : Various	-	4.324	Nov 2020	-		-		-		-	0.000	4.324	-
Expeditionary Organic Tactical Airborne Intelligence, Surveillance, and Reconnaissance Capability Set (EOTACS) Payload Integration	MIPR	Various : Various	0.808	0.279	Jul 2020	0.283	Mar 2021	0.289	Dec 2022	-		0.289	Continuing	Continuing	-
Multi-Mission Tactical Unmanned Aerial Service (MTUAS)/Payloads Development and Integration	MIPR	Various : Various	10.852	7.224	Mar 2020	2.136	Jun 2021	3.505	Feb 2022	-		3.505	Continuing	Continuing	-
Group 3 UAS Platform/ Payload Development and Integration	MIPR	Various : Various	-	-		-		2.076	Nov 2021	-		2.076	Continuing	Continuing	-
Group 3 UAS Platform/ Payload Development and Integration (OCO)	MIPR	Various : Various	4.467	2.392	Mar 2020	1.194	Mar 2021	-		-		-	0.000	8.053	-
Group 4 UAS Platform/ Payloads Development and Integration	MIPR	Various : Various	12.032	6.681	Mar 2020	2.434	Mar 2021	0.885	Mar 2022	-		0.885	Continuing	Continuing	-
Prior Year Effort	Various	Various : Various	16.994	-		-		-		-		-	0.000	16.994	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command													Date: May 2021		
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR				Project (Number/Name) S855 / Unmanned ISR					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Effort - Congressional Add	Various	Various : Various	11.000	-		-		-		-		-	0.000	11.000	-
Subtotal			68.446	27.706		10.617		9.912		-		9.912	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SAFC Platform/Payload Integration	MIPR	Various : Various	1.532	0.600	Jan 2020	0.500	Jan 2021	0.213	Dec 2021	-		0.213	Continuing	Continuing	-
MTUAS Platform/Payload Support	MIPR	Various : Various	0.918	0.500	Jan 2020	0.976	Jan 2021	1.618	Jan 2022	-		1.618	Continuing	Continuing	-
Group 3 UAS Platform/ Payload Mission Kits (OCO)	MIPR	Various : Various	-	2.003	May 2020	1.276	Mar 2021	-		-		-	0.000	3.279	Continuing
Group 3 UAS Platform/ Payload Mission Kits	MIPR	Various : Various	-	-		-		2.000	Apr 2022	-		2.000	Continuing	Continuing	-
Subtotal			2.450	3.103		2.752		3.831		-		3.831	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SAFC Sensor Testing, Evaluation and Demonstration	MIPR	Various; Various : Various	12.718	0.280	Nov 2019	1.295	Dec 2020	0.965	Dec 2021	-		0.965	Continuing	Continuing	-
SAFC - NAVSEA - JHU / APL	C/Various	Various : Various	1.000	1.200	Feb 2020	-		-		-		-	0.000	2.200	-
SAFC - NIWC: Beyond Line of Sight (BLOS) Laser Mod Payload Auto Target Recognition Development and Integration	C/Various	Various : Various	0.400	0.400	Feb 2020	-		-		-		-	0.000	0.800	-

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**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160434BB / <i>Unmanned ISR</i>	<b>Project (Number/Name)</b> S855 / <i>Unmanned ISR</i>
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Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SAFC NAWC - AD	C/Various	Various : Various	-	1.200	Feb 2020	-		-		-		-	0.000	1.200	-
SAFC NextTech Solutions (NTS) Inc.	C/Various	Various : Various	-	1.000	Jun 2020	-		-		-		-	0.000	1.000	-
MTUAS Platform/Payload Test and Evaluation	MIPR	Various : Various	1.447	0.130	Mar 2020	0.377	Dec 2021	0.625	Mar 2022	-		0.625	Continuing	Continuing	-
Group 3 UAS Test and Evaluation	MIPR	Various Vendors During Integrations : Various : Various	-	-		-		1.939	Jan 2022	-		1.939	Continuing	Continuing	-
Group 3 UAS Test and Evaluation (OCO)	MIPR	Various Vendors During Integrations : Various	0.533	0.605	Jan 2020	0.530		-		-		-	0.000	1.668	-
Group 4 UAS Test and Evaluation	Various	Various : Various Vendors During Integration	0.388	0.287	Mar 2020	0.583	Mar 2021	0.207	Mar 2022	-		0.207	Continuing	Continuing	-
Prior Year	Various	Various : Various	5.393	-		-		-		-		-	0.000	5.393	-
<b>Subtotal</b>			21.879	5.102		2.785		3.736		-		3.736	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SAFC Sensor Testing, Evaluation and Demonstration Management	MIPR	Various : Various	3.355	1.615	Mar 2020	1.000	Dec 2020	0.527	Mar 2021	-		0.527	Continuing	Continuing	-
SAFC NexTech Solutions (NTS) Inc.	C/Various	Various : Various	-	4.931	Jun 2020	-		-		-		-	0.000	4.931	-
Prior Year Effort	Various	Various : Various	2.497	-		-		-		-		-	0.000	2.497	-
<b>Subtotal</b>			5.852	6.546		1.000		0.527		-		0.527	Continuing	Continuing	N/A



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR					Project (Number/Name) S855 / Unmanned ISR					
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			98.627	42.457		17.154		18.006		-		18.006	Continuing	Continuing	N/A

### Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

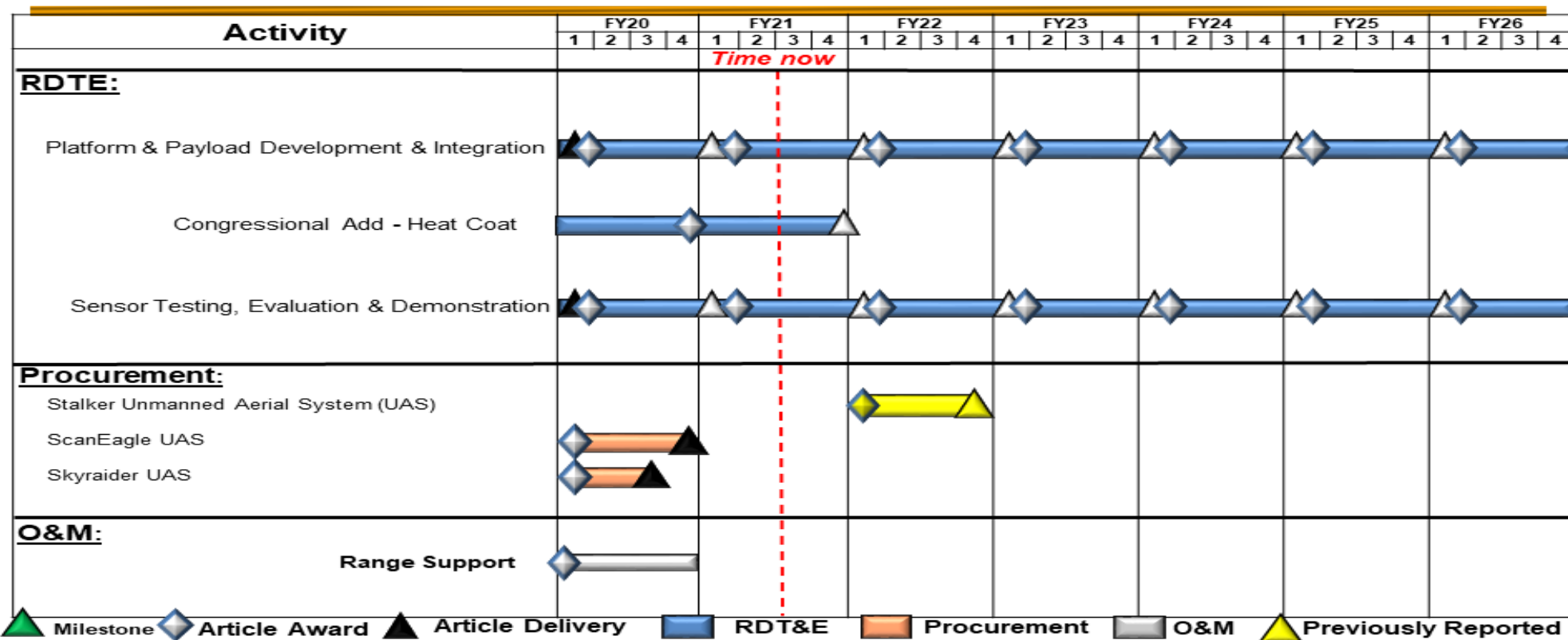
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160434BB / Unmanned ISR

Project (Number/Name)  
S855 / Unmanned ISR

## Special Application For Contingencies (SAFC) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

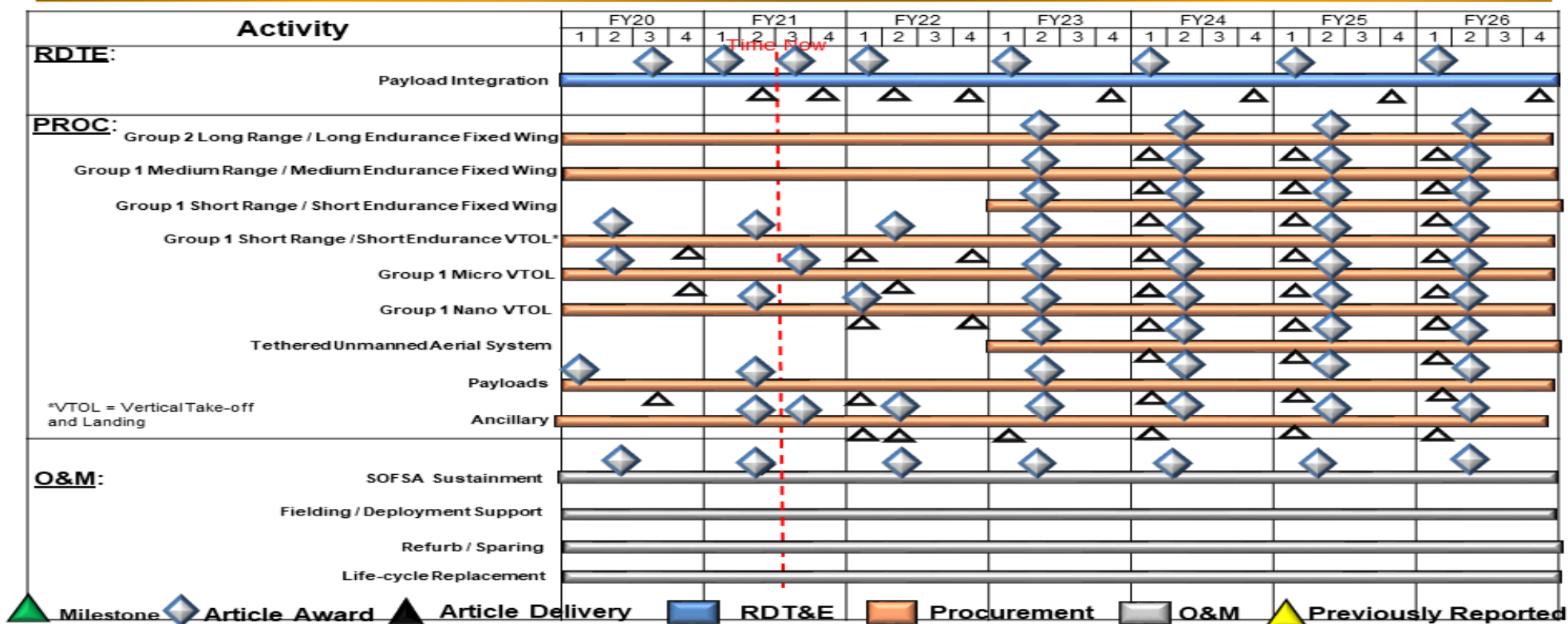
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160434BB / Unmanned ISR

Project (Number/Name)  
S855 / Unmanned ISR

# Expeditionary Organic Tactical Airborne System (EOTACS) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

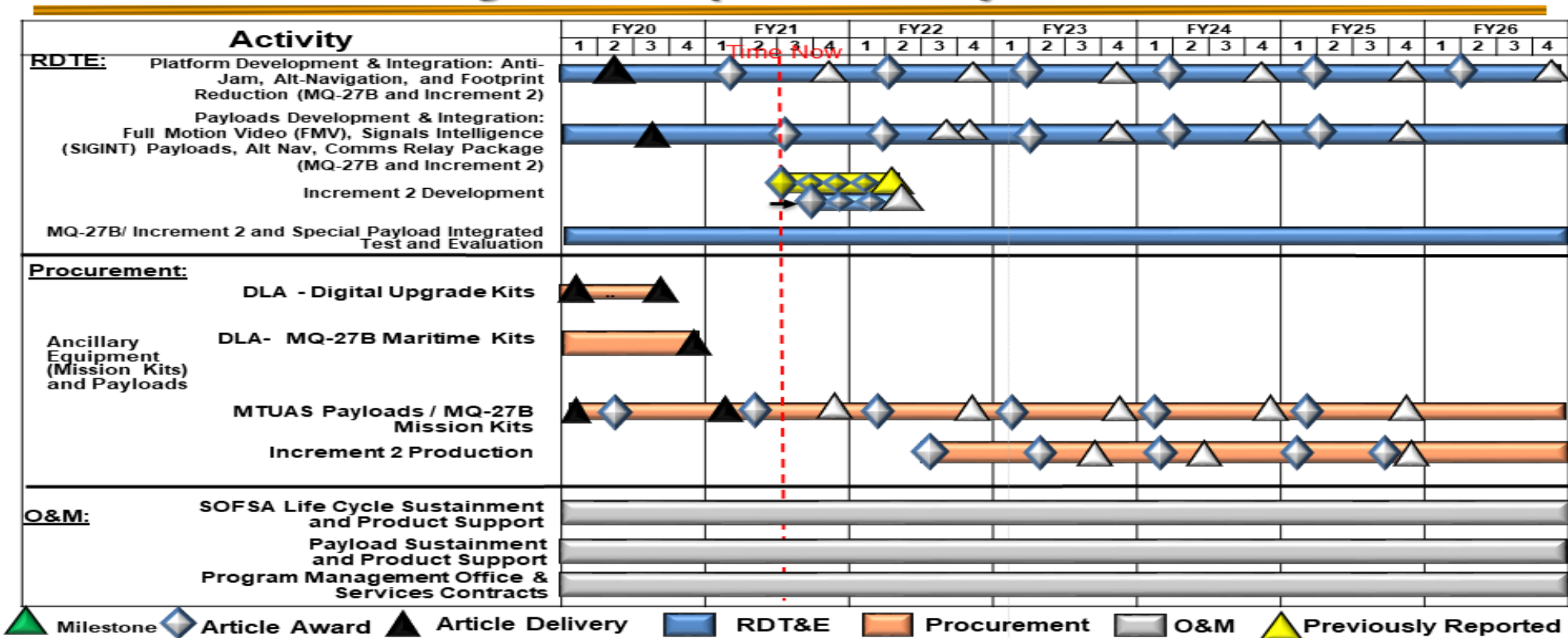
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160434BB / Unmanned ISR

Project (Number/Name)  
S855 / Unmanned ISR

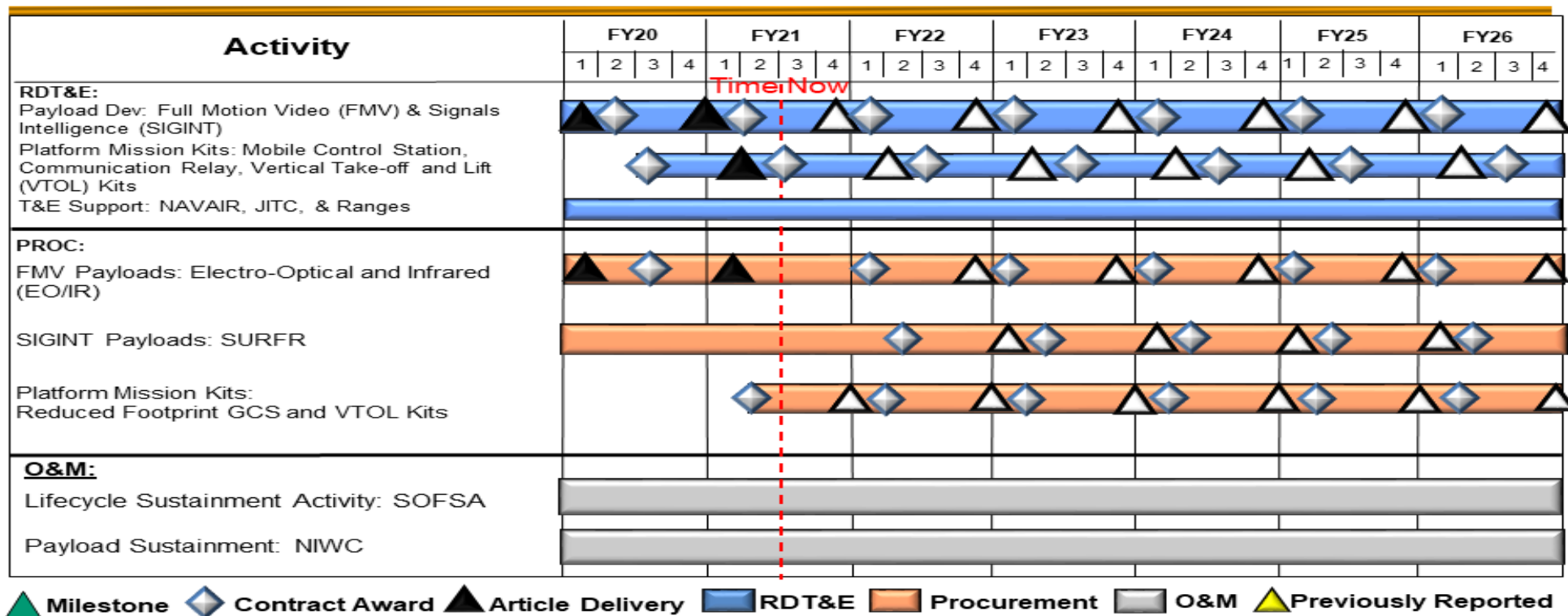
# Multi-Mission Tactical Unmanned Aerial System (MTUAS) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR	Project (Number/Name) S855 / Unmanned ISR	

## Group 3 Unmanned Aerial Systems Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

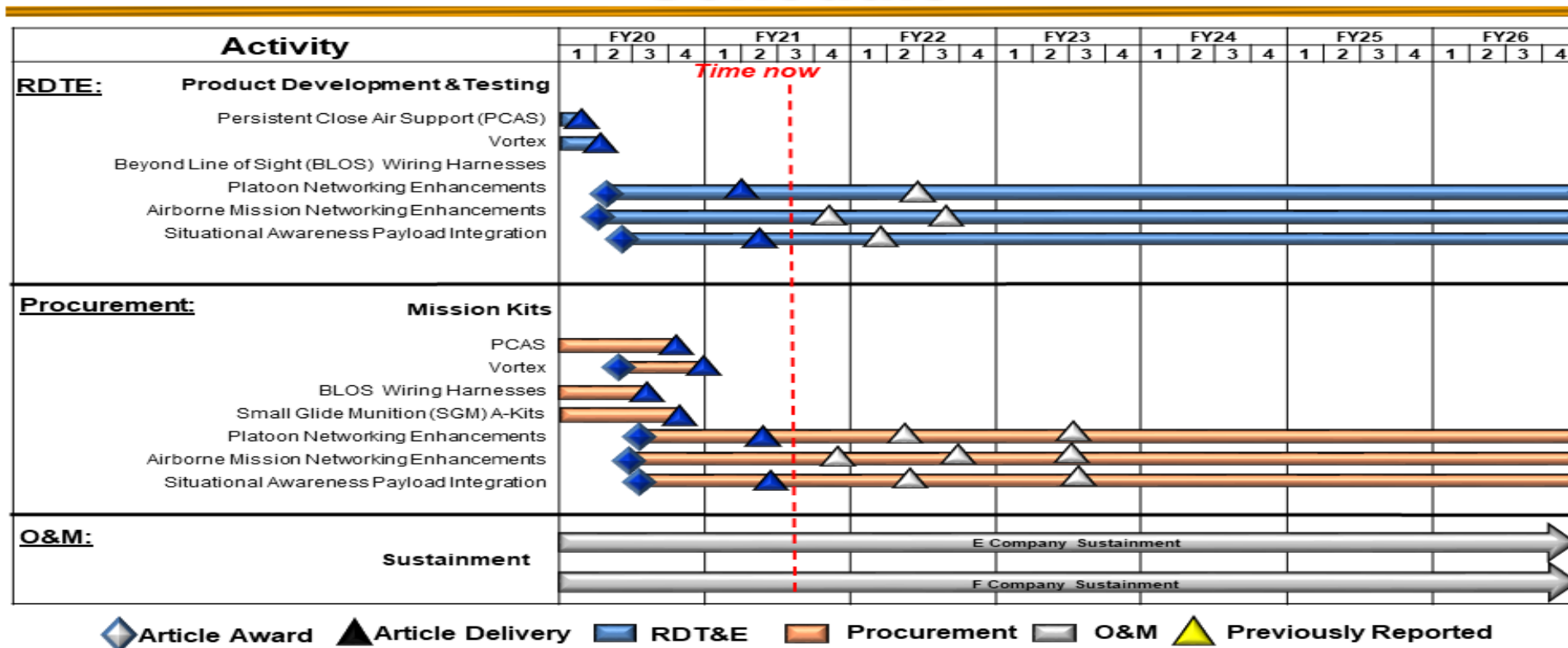
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160434BB / Unmanned ISR

Project (Number/Name)  
S855 / Unmanned ISR

## Group 4 UAS: MQ-1C Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160434BB / <i>Unmanned ISR</i>	<b>Project (Number/Name)</b> S855 / <i>Unmanned ISR</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Special Application for Contingencies (SAFC)</i></b>				
Product Development, Support, and Management	1	2020	4	2026
Test and Evaluation	1	2020	4	2026
Anti-Icing Development on TigerShark	1	2020	4	2021
<b><i>Group 1 Unmanned Aerial System (UAS)/Expeditionary Organic Tactical Airborne ISR Capability Set (EOTACS)</i></b>				
Payload Integration; Test Range Support	1	2020	4	2026
<b><i>Group 2 Multi-Mission Tactical Unmanned Aerial System (MTUAS)</i></b>				
Platform/Payload Development and Integration	1	2020	4	2026
Platform/Payload Test & Evaluation	1	2020	4	2026
<b><i>Group 3 UAS</i></b>				
Payload Developmment	1	2020	4	2026
Platform/Mission Kits Development and Integration	2	2020	4	2026
Platform/Payload Test & Evaluation	1	2020	4	2026
<b><i>Group 4 UAS</i></b>				
Persistent Close Air Support (PCAS) Integration	1	2020	1	2020
Vortex Integration	1	2020	2	2020
Platoon Networking Enhancements	2	2020	4	2026
Airborne Mission Networking Enhancements	2	2020	4	2026
Situational Awareness Sensor Integration	2	2020	4	2026

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 1160480BB / <i>SOF Tactical Vehicles</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	34.947	11.104	14.256	7.703	-	7.703	-	-	-	-	-	-
S910: <i>SOF Tactical Vehicles</i>	34.947	11.104	14.256	7.703	-	7.703	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This program element provides for the development and testing of a variety of capability upgrades to Special Operations Forces (SOF) Vehicles and ancillary equipment. Current SOF tactical vehicles are categorized into Light, Medium, Heavy, and Commercial, and include the following: Light Tactical All-Terrain Vehicles (LTATV), Ground Mobility Vehicles (GMV 1.1), Mine Resistant Ambush Protected (MRAP) vehicles, Non Standard Commercial Vehicles (NSCV), Joint Light Tactical Vehicle (JLTV), and SOF Coms kits for Stryker. The SOF mission mandates that SOF vehicles remain technologically superior, operate in multiple environments, and be able to meet any threat to provide a maximum degree of survivability. These technologies will be pursued via rapid prototyping efforts when appropriate.

The FY 2022 funding request was reduced by \$7.808 million to account for the availability of prior year execution balances.

FY 2022 Fiscal Balancing: -\$0.884 million decrease is attributed to the reductions necessary to accommodate budget realities and directed strategy driven changes. Reduces Family of Special Operations Vehicles (FSOV) Test and Evaluation (T&E) on GMV 1.1 Hybrid electric prototypes.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	11.150	9.263	4.191	-	4.191
Current President's Budget	11.104	14.256	7.703	-	7.703
Total Adjustments	-0.046	4.993	3.512	-	3.512
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-0.007			
• Congressional Rescissions	-	-			
• Congressional Adds	-	5.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.397	-			
• Other Adjustments	0.351	-	3.512	-	3.512

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S910: *SOF Tactical Vehicles*

Congressional Add: *Next Generation Combat Vehicles*

FY 2020	FY 2021
-	5.000

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 1160480BB / <i>SOF Tactical Vehicles</i>
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<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>	<b>FY 2020</b>	<b>FY 2021</b>
Congressional Add Subtotals for Project: S910	-	5.000
Congressional Add Totals for all Projects	-	5.000

**Change Summary Explanation**

Funding:

FY 2020: Net decrease of \$0.046 million is due to the transfer of funds to Small Business Innovative Research/Small Business Technology Research Transfer programs (SBIR/STTR) (\$0.397 million) and funding made available from PE 1160431BB to support emerging command requirements in the year of execution (\$0.351 million).

FY 2021: Net increase of \$4.993 million is due to Congressional program increase for Next Generation Combat Vehicles (\$5.000 million) and a Defense Wide (DW) non-programmatic reduction (\$0.007 million).

FY 2022: Increase of \$3.512 million is in support of modernizing the Family of Special Operations Vehicles (FOSOV) fleet in support of the National Security Strategic Guidance. Modernization efforts include LTATV autonomy, signature management/reduction, and NSCV vulnerability evaluation.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160480BB / SOF Tactical Vehicles				Project (Number/Name) S910 / SOF Tactical Vehicles			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S910: SOF Tactical Vehicles	34.947	11.104	14.256	7.703	-	7.703	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Family of Special Operations Vehicles (FSOV) program develops, tests, and evaluates Special Operations Forces (SOF) Tactical Vehicles and associated modifications. FSOV engages in annual technology insertion efforts, to include rapid prototyping/fielding efforts targeted at ground vehicle capability enhancements across the mobility, survivability, payload, and durability spectrum. The SOF mission mandates that SOF vehicles remain technologically superior, operate in multiple environments and be able to meet any threat to provide a maximum degree of survivability. The current family of SOF tactical vehicles include: light mobility vehicles, medium mobility vehicles, non-standard commercial vehicles, and heavy mobility vehicles.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> FSOV	11.104	9.256	7.703
<p><b>Description:</b> Funding provides for design/engineering, test, and evaluation costs related to capability upgrades in the following areas: Survivability, Lethality, Signature Management, Mobility/Performance, Communications, and Product Development. These capability upgrades and Engineering Change Proposals (ECPs) are incorporated across the FSOV portfolio of vehicles Non-Standard Commercial Vehicle (NSCV), Ground Mobility Vehicle (GMV 1.1), Light Tactical All-Terrain Vehicle (LTATV), Mine Resistant Ambush Protected (MRAP) vehicle, and the Joint Light Tactical Vehicle (JLTV).</p> <p><b>FY 2021 Plans:</b> Continue design/development and integration of ECPs that implement capability upgrades and improve the performance of the NSCV, GMV 1.1, LTATV, MRAP, and JLTV vehicles. Initiate test and evaluation for hybrid/electric GMV 1.1 and Purpose Built NSCV. In addition, FSOV will initiate integration and test of designated Counter-Unmanned Aerial System (C-UAS)/Precision Strike Systems (PSS) on vehicle platforms to ensure performance of both systems with minimal adverse impacts. FY 2021 also includes technology development and insertion efforts for Autonomous LTATV, Acoustic Signature Reduction, Transferable Armor, and other SOF modification upgrades. Complete Purpose-Built NSCV testing.</p> <p><b>FY 2022 Plans:</b> Continues design/development and integration of ECPs that implement capability upgrades and improves the performance of the NSCV, GMV 1.1, LTATV, MRAP, and JLTV platforms. FSOV will continue integration and test of designated Counter-Unmanned Aerial System (C-UAS)/Precision Strike System (PSS) on vehicles platforms. In addition, initiates development and Test and Evaluation phase of autonomous integration into LTATV. FY 2022 also includes the technology development and/or insertion efforts for Alternative Position Navigation Timing (A-PNT), Signature Reduction, 360 degree situational awareness, NSCV Blast Vulnerability study, and other SOF mobility platform efforts.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b></p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160480BB / <i>SOF Tactical Vehicles</i>	<b>Project (Number/Name)</b> S910 / <i>SOF Tactical Vehicles</i>	

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Decrease of \$1.553 million is due to completion of Purpose-Built NSCV testing.			
<b>Accomplishments/Planned Programs Subtotals</b>	11.104	9.256	7.703

	<b>FY 2020</b>	<b>FY 2021</b>
<b>Congressional Add:</b> Next Generation Combat Vehicles	-	5.000
<b>FY 2021 Plans:</b> Program increase will be used to collaborate with the Army on carbon fiber and lightweight carbon foam materials, as well as enhance our existing efforts		
<b>Congressional Adds Subtotals</b>	-	5.000

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0204TACVEH: <i>Tactical Vehicles</i>	119.107	33.148	26.806	-	26.806	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

Apply SOF-Peculiar modifications to service common or Commercial Off The Shelf (COTS) vehicles whenever possible. Otherwise, incorporate purpose-built, Non-Developmental Item, or modified COTS vehicles if/when service solution is unavailable.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160480BB / SOF Tactical Vehicles				Project (Number/Name) S910 / SOF Tactical Vehicles					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Family of Special Operations Vehicles (FSOV) Ground Mobility Vehicle (GMV) 1.1 Capability Enhancements / Engineering Change Proposal (ECP) Development	Various	Various : Various	13.886	1.708	Dec 2019	1.350	Nov 2020	1.222	Feb 2022	-		1.222	Continuing	Continuing	-
FSOV Non-Standard Commercial Vehicle (NSCV) Capability Enhancements / ECP Development	Various	Various : Various	1.156	5.648	May 2020	1.650	Nov 2020	-		-		-	0.000	8.454	-
FSOV Light Tactical All-Terrain Vehicle (LTATV) Capability Enhancements / ECP Development	Various	Various : Various	0.985	-		0.700	Jul 2021	3.031	Dec 2021	-		3.031	Continuing	Continuing	-
Mine Resistant Ambush Protected (MRAP) Capability Enhancements/ ECP Development	Various	Various : Various	-	0.586	Sep 2020	1.100	Nov 2020	2.300	Jan 2022	-		2.300	Continuing	Continuing	-
FSOV Joint Light Tactical Vehicle (JLTV) Capability Enhancements / ECP Development	Various	Various : Various	-	0.750	Apr 2020	1.000	Nov 2020	-		-		-	0.000	1.750	-
FSOV GMV 1.1 and NSCV Survivability Enhancement/ Improvement Efforts	Various	Various : Various	1.134	0.452	Nov 2019	0.450	Feb 2021	0.650	Apr 2022	-		0.650	Continuing	Continuing	-
Next Generation Combat Vehicles Congressional Plus-Up	Various	Various : Various	-	-		5.000	May 2021	-		-		-	0.000	5.000	-
Prior Year Funding	Various	Various : Various	0.385	-		-		-		-		-	0.000	0.385	-
Prior Year Funding (OCO)	C/Various	Various : Various	0.725	-		-		-		-		-	0.000	0.725	-
Subtotal			18.271	9.144		11.250		7.203		-		7.203	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160480BB / SOF Tactical Vehicles				Project (Number/Name) S910 / SOF Tactical Vehicles					
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Funding	Various	Various : Various	4.445	-		-		-		-		-	0.000	4.445	-
Subtotal			4.445	-		-		-		-		-	0.000	4.445	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GMV 1.1 Test and Evaluation Validation Efforts (Automotive, Command, Control, Communications, Computers, and Intelligence (C4I), Ballistics, Operator Events)	Various	Various : Various	0.339	0.382	Aug 2020	1.363	Jan 2021	0.250	Mar 2022	-		0.250	Continuing	Continuing	-
NSCV Test and Evaluation Validation Efforts (Automotive, C4I, Ballistics, Operator Events)	Various	Various : Various	2.203	0.397	Jun 2020	1.643	Nov 2020	0.250	Mar 2022	-		0.250	Continuing	Continuing	-
LTATV Test and Evaluation Efforts	Various	Various : Various	-	1.181	Aug 2020	-		-		-		-	0.000	1.181	-
Prior Year Funding	Various	Various : Various	9.689	-		-		-		-		-	0.000	9.689	-
Subtotal			12.231	1.960		3.006		0.500		-		0.500	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			34.947	11.104		14.256		7.703		-		7.703	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

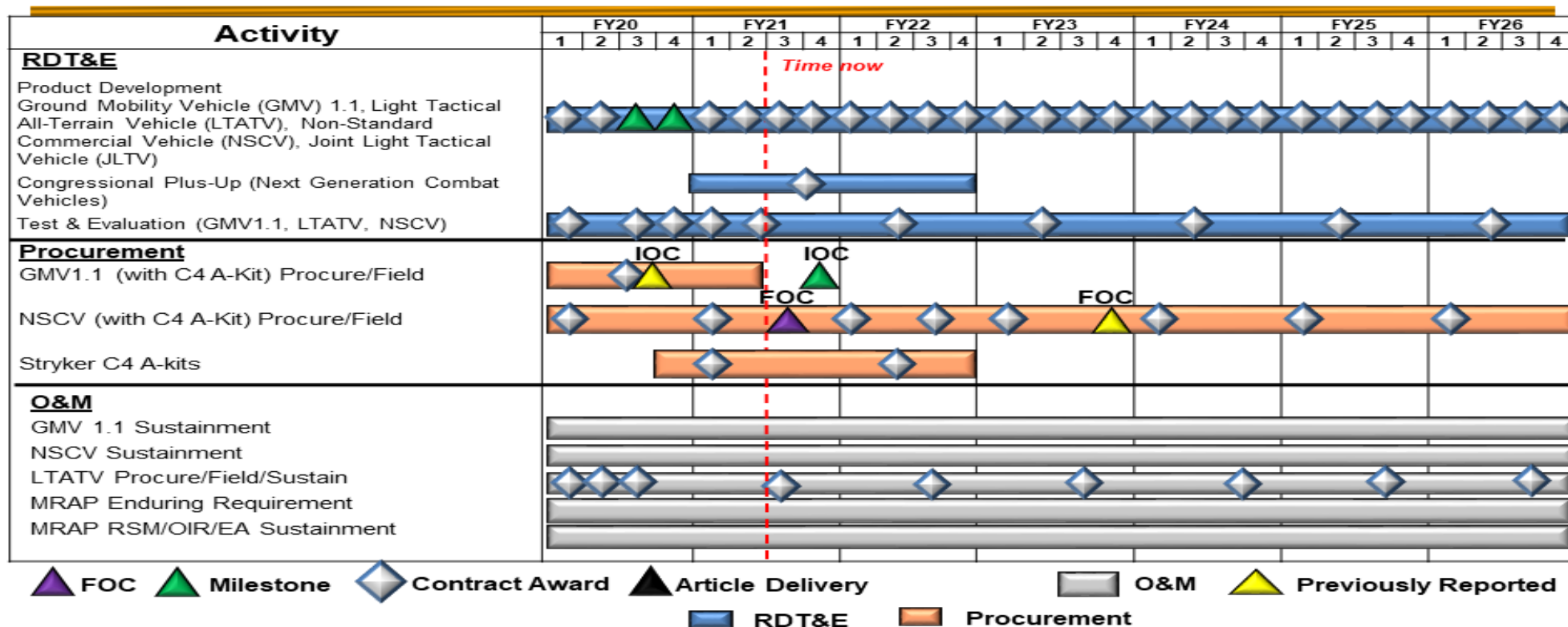
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160480BB / SOF Tactical Vehicles

Project (Number/Name)  
S910 / SOF Tactical Vehicles

## Family of Special Operations Vehicles (FSOV) Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160480BB / <i>SOF Tactical Vehicles</i>	<b>Project (Number/Name)</b> S910 / <i>SOF Tactical Vehicles</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Family of Special Operations Vehicles (FSOV)</i></b>				
Product Development [Ground Mobility Vehicle (GMV) 1.1, Light Tactical All-Terrain Vehicle (LTATV), Non-Standard Commercial Vehicle (NSCV), Joint Light Tactical Vehicle]	1	2020	4	2026
Next Generation Combat Vehicles Congressional Plus-Up	1	2021	4	2022
Test & Evaluation (GMV 1.1, LTATV, NSCV)	1	2020	4	2026



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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					PE 1160483BB / Maritime Systems							
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	507.919	70.738	68.538	58.430	-	58.430	-	-	-	-	-	-
S0417: Underwater Systems	456.711	47.976	51.810	41.124	-	41.124	-	-	-	-	-	-
S1684: Surface Craft	51.208	22.762	16.728	17.306	-	17.306	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This program element provides for Engineering and Manufacturing Development (EMD) of Special Operations Forces (SOF) Surface and Undersea Mobility platforms. This program element also provides for pre-acquisition activities to quickly respond to new requirements for SOF surface and undersea mobility, looking at multiple alternatives to include cross-platform technical solutions, service-common solutions, Commercial-Off-The-Shelf technologies, and new development efforts. These technologies will be pursued via rapid prototyping efforts when appropriate.

The Underwater Systems project provides for EMD of combat submersibles, SOF combat diving systems, underwater support systems, and underwater equipment. This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component, prototype development, and exploitation of emerging technology opportunities to deliver enhanced capabilities) to respond to emergent requirements. These submersibles, equipment, and diving systems are used by SOF in the conduct of infiltration/extraction, personnel/material recovery, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible systems, diving systems, and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions.

The Surface Craft project provides for EMD of medium and heavy surface combatant craft, combatant craft mission equipment, and pre-planned product improvement and technology insertion engineering changes to meet the unique requirements of SOF. This project element also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to quickly respond to new requirements for maritime craft and subsystems. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct operations associated with SOF maritime missions.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / <i>Maritime Systems</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	72.626	59.882	51.099	-	51.099
Current President's Budget	70.738	68.538	58.430	-	58.430
Total Adjustments	-1.888	8.656	7.331	-	7.331
• Congressional General Reductions	-	-0.044			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	8.700			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.700	-			
• SBIR/STTR Transfer	-2.588	-			
• Other Adjustments	-	-	7.331	-	7.331

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S0417: *Underwater Systems*

Congressional Add: *SOF Combat Diving*

	<b>FY 2020</b>	<b>FY 2021</b>
	3.000	8.700
Congressional Add Subtotals for Project: S0417	3.000	8.700
Congressional Add Totals for all Projects	3.000	8.700

**Change Summary Explanation**

Funding:

FY 2020: Net decrease of \$1.888 million is due to transfer of funds to Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) reductions (-\$2.588 million) and an increase was to support DDS modernization efforts and testing (\$0.700 million).

FY 2021: Net increase of \$8.656 million to support of SOF Combat Diving Propulsion (\$4.200 million) and Communication (\$4.500 million) and Congressional direction reduction for excess to need (\$-0.044 million).

FY 2022: Net increase of \$7.331 million is due to an increase to support SOF Combat Diving prototyping, developmental testing/operational testing (DT/OT), and technical management of the increased prototyping efforts for new capabilities aligning with Component requirements (\$0.750 million), an increase to support SEAL Delivery Vehicle (SDV) MK 11 development enhancements (\$3.027 million), an increase to support continued development and testing of Maritime Precision Engagement (MPE) on Combatant Craft Medium (CCM) (\$4.500 million) and funding made available to support emerging critical Command requirements (\$-0.946 million).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command		Date: May 2021
<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development		<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / Maritime Systems
Schedule: None.		
Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems				Project (Number/Name) S0417 / Underwater Systems			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S0417: Underwater Systems	456.711	47.976	51.810	41.124	-	41.124	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

This project provides for Engineering and Manufacturing Development (EMD) of combat underwater submersibles, Special Operations Forces (SOF) combat diving systems, underwater support systems, and underwater equipment. This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to respond to emergent requirements. These submersibles, equipment, and diving systems are used by SOF in the conduct of infiltration/extraction, personnel/material recovery, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible systems, diving systems, and unique equipment provides small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions. These technologies will be pursued via rapid prototyping efforts when appropriate.

## B. Accomplishments/Planned Programs (\$ in Millions)

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Shallow Water Combat Submersible (SWCS) / SEAL Delivery Vehicle Mark 11 (SDV MK 11)  <b>Description:</b> SWCS provides for the design, development, and test of one EDM and 10 production units to replace the legacy MK 8 MOD 1 SEAL Delivery Vehicle (SDV) system. The material solution for SWCS is the SDV MK 11. SWCS is a free-flooding combat submersible mobility platform suitable for transporting and deploying SOF and their payloads for a variety of SOF missions. SWCS will be deployable from a Dry Deck Shelter (DDS), surface ships, and land. The SWCS system includes the SWCS vehicle and SWCS support equipment comprised of Mission Support Equipment (MSE), Pack-Up Kit (PUK), and Transportation and Handling (T&H). It also includes integration efforts with the current DDS and development of product improvements accomplished throughout the lifecycle of the system. SWCS line item is transitioning to SDV in FY22 to better align with historical terminology and material solution.  <b>FY 2021 Plans:</b> Continue Pre-Planned Product Improvement (P3I). P3I enhancements include, but are not limited to, Propulsor, Power and Energy, Acoustic and Radio Frequency indicators and warning capabilities, Electro-Optical Infrared (EO/IR) sensor development, payload improvements, and self recovery.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$1.411 million is due to transfer of funding line to SEAL Delivery Vehicle (SDV).	1.143	1.411	-
<b>Title:</b> SEAL Delivery Vehicle (SDV MK 11)  <b>Description:</b> The SDV MK 11 (Acquisition program name: SWCS) provides for the design, development and test of one EDM and 10 production units to replace the legacy MK 8 MOD 1 SDV system. The SDV MK 11 is a free-flooding combat submersible mobility platform suitable for transporting and deploying SOF and their payloads for a variety of SOF missions. The SDV MK	-	-	4.348

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 7		<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / <i>Maritime Systems</i>		<b>Project (Number/Name)</b> S0417 / <i>Underwater Systems</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<p>11 will be deployable from a DDS, surface ships, and land. The MK 11 system includes the MK 11 vehicle and MK 11 support equipment, comprised of Mission Support Equipment (MSE), Pack-Up Kit (PUK), and Transportation and Handling (T&amp;H). It also includes integration efforts with the current DDS and development of product improvements accomplished throughout the lifecycle of the system.</p> <p><b>FY 2022 Plans:</b> Continues SDV MK 11 Pre-Planned Product Improvement (P3I). P3I enhancements include, but are not limited to, Power and Energy, Acoustic and Radio Frequency indicators and warning capabilities, Electro-Optical Infrared (EO/IR) sensor, payload improvements, and self recovery.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$4.348 million is due to transfer of funding line from SWCS.</p>					
<p><b>Title:</b> Dry Combat Submersible (DCS)</p> <p><b>Description:</b> DCS provides for the advanced development, engineering, manufacturing, and testing efforts for a surface-launched, dry, diver lock-in/lock-out vessel capable of inserting and extracting SOF and/or payloads into denied areas of one Engineering Development Model (EDM) and two production units. USSOCOM tested one submersible prototype to validate test methodologies, commercial classification, and SOCOM safety certification processes and will continue to use the prototype to evaluate capability enhancing technologies and reduce risk in the DCS program. This program includes funding for enhanced warfighter capabilities such as Mid-Water Column Lock-In/Lock-Out, depressurization pump, and submarine interoperability.</p> <p><b>FY 2021 Plans:</b> Continue incorporation of Pre-Planned Product Improvement (P3I) to increase the operational capability of DCS. Continue government acceptance testing on DCS 2. Continue DCS Next Engineering and Manufacturing Development efforts.</p> <p><b>FY 2022 Plans:</b> Continues the incorporation of P3I to increase the operational capability of DCS to include Navy submarine/grey hull interoperability, efforts to address obsolescence, and the continued insertion of Undersea Craft Mission Equipment (UCME) developed technologies. Begins government acceptance testing of DCS 3. Continues DCS Next requirements development, modeling, and simulation efforts.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$4.249 million is due to DCS 1 completing operational testing in FY 2021 as well as continuing the transition of DCS Block I to sustainment.</p>			15.606	17.292	13.043
<p><b>Title:</b> Dry Deck Shelter (DDS) Modernization</p>			9.167	1.206	1.057

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems	Project (Number/Name) S0417 / Underwater Systems		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2020	FY 2021	FY 2022
<p><b>Description:</b> DDS provides for the Pre-Planned Product Improvement (P3I), testing, and integration of specialized underwater systems to meet the unique requirements of SOF, and compatibility with the submarine fleet. The current DDS is a certified diving system which attaches to modified host submarines that provides for insertion of SOF forces and platforms. Funding supports product improvements to the current DDS, as well as associated diver equipment for in-service submarine support systems, unmanned underwater vehicles, and follow on development efforts for future SOF payloads.</p> <p><b>FY 2021 Plans:</b> Continue development of field changes necessary to extend the useful life of the DDS and increases capacity to carry larger payloads. Continue the transition study of the Ship, Submersible, Guided Missile, Nuclear (SSGN) to Virginia (VA) Class host platform.</p> <p><b>FY 2022 Plans:</b> Continues development of field changes necessary to extend the useful life of the DDS and increases capacity to carry larger payloads.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.149 million is due to transition study completion of the SSGN to VA Class host platform.</p>					
<p><b>Title:</b> SOF Combat Diving (CBDIV)</p> <p><b>Description:</b> SOF Combat Diving provides the EMD, testing, and rapid prototyping of SOF peculiar diving equipment providing the SOF combat diver the ability to engage the enemy and conduct operations. SOF Combat Diving will support the SDV, SWCS, DCS, and surface craft with the conduct of infiltration/extraction, material recovery, underwater ship attack, beach clearance, and other missions. Technologies include, but are not limited to, commercial and developmental life support, maneuverability and propulsion, diver navigational accuracy and situational awareness, environmental protection, and communications between dive teams as well as between divers and external vessels/craft. SOF Combat Diving is designated a Middle Tier of Acquisition (MTA) program, which uses the rapid prototyping pathway.</p> <p><b>FY 2021 Plans:</b> Continue development, to include test and evaluation for environmental protection, navigation, communication and propulsion capabilities, and begin shallow water underwater breathing apparatus development.</p> <p><b>FY 2022 Plans:</b> Continues development capabilities, prototyping, to include test and evaluation of environmental protection, navigation, communication and propulsion, and an excursion capable Underwater breathing apparatus equipment material solution analysis and advanced component prototype development.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b></p>			2.580	2.161	3.183

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems		Project (Number/Name) S0417 / Underwater Systems	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Increase of \$1.022 million supports the material solution analysis and advanced component prototype development of five underwater breathing apparatus, provides for development test of the prototypes, and funds initial manned testing and evaluation activities.					
<b>Title:</b> Undersea Craft Mission Equipment (UCME)  <b>Description:</b> UCME provides a rapid response capability to support SOF underwater craft and diver systems, subsystems, and their emerging requirements. UCME provides technology refresh efforts to correct system deficiencies, improve asset life, and enhance mission capability to leverage and exploit emerging technologies within the maritime SOF undersea capability portfolio. UCME focuses on spearheading specific Technology Readiness Level (TRL) 6 technology for compatibility, maturity, marinization, and successful transition to SOF undersea craft programs.  <b>FY 2021 Plans:</b> Continue development of undersea survivability enhancements; underwater and maritime domain communications; enhanced situational awareness and Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) unique power and energy capabilities; other capability enhancements and enabling technologies for assured access, which supports the Interim National Security Strategic Guidance (INSSG).  <b>FY 2022 Plans:</b> Continues development of undersea survivability enhancements; underwater and maritime domain communications; enhanced C5ISR and Situational Awareness (C5ISR/SA); unique power and energy capabilities; other capability enhancements and enabling technologies for assured access and against near peer threats, which supports the INSSG.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$1.167 million is due to anticipated maturation of the Acoustic Intercept Receiver (AIR) for Unmanned Underwater Vehicle (UUV) (MK 18 Mod 1) within the C5ISR/SA technology focus area to a readiness level for effective transition to a program of record.			16.480	19.692	18.525
<b>Title:</b> MK18 Mod 1 Unmanned Underwater Vehicle (UUV)  <b>Description:</b> MK 18 Mod 1 UUV enables access to contested/denied areas in the maritime domain, provides maritime special reconnaissance capabilities and reduces risk to personnel and manned platforms. This program develops and integrates SOF-peculiar (SOF-P) modifications to the Service Common, MFP-2 funded, Mark 18 Mod 1 UUV.  <b>FY 2021 Plans:</b>			-	1.000	0.968

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / <i>Maritime Systems</i>	<b>Project (Number/Name)</b> S0417 / <i>Underwater Systems</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
<p>Begin payload development/integration for Beyond Line Of Sight (BLOS) capability via cognitive router effort, encrypted communications, underwater launch and recovery, and artificial intelligence. Begin development/integration for Acoustic Intercept Receiver.</p> <p><b>FY 2022 Plans:</b> Continues payload development/integration for Beyond Line Of Sight (BLOS) capability via cognitive router effort, encrypted communications, underwater launch and recovery, and artificial intelligence. Continues development/integration for Acoustic Intercept Receiver. Conducts non-recurring engineering (NRE) of the Block C SOF-P UUV.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.032 million is due to funding made available to support emerging critical Command requirements.</p>			
<p><b>Title:</b> Combatant Craft Light (CCL)</p> <p><b>Description:</b> CCL is a small combatant craft that supports deployment of six combat equipped SOF operators and their payloads for selected missions in multiple threat environments. Its compact form factor provides SOF with versatile mission transportability, deployment, and utility capabilities.</p> <p><b>FY 2021 Plans:</b> Complete integration and testing of Low Rate Initial Production (LRIP) craft.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.348 million is due to the completion of integration and testing and the shift to full rate production.</p>		-	0.348
<b>Accomplishments/Planned Programs Subtotals</b>		44.976	43.110
		<b>FY 2020</b>	<b>FY 2021</b>
<p><b>Congressional Add:</b> SOF Combat Diving</p> <p><b>FY 2020 Accomplishments:</b> Continue development of SOF Diver propulsion. Specific development on STIDD's Diver Propulsion Device (DPD) in areas of increased battery capacity with improvements to Battery Status Indicator, cabling and connectors, increased depth rating and development improvements to battery charging time of the STIDD DPD.</p> <p><b>FY 2021 Plans:</b> Continues development of SOF Diver propulsion. Specific efforts target development, testing, certification, shore based use, Submarine and Surface craft carry-on approval of multiple battery subsystems supporting Collective and Individual diver propulsion devices. Continues development of SOF Diver communication. Unique system design improvements required for SOF diver use, developmental testing, and evaluation of resulting engineering development model systems. Specific efforts target development of C3SA</p>		3.000	8.700



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / <i>Maritime Systems</i>	<b>Project (Number/Name)</b> S0417 / <i>Underwater Systems</i>	

	<b>FY 2020</b>	<b>FY 2021</b>
diver underwater communication, diver-to-diver voice communication and the development and testing of battery certification.		
<b>Congressional Adds Subtotals</b>	3.000	8.700

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0210US: <i>Underwater Systems</i>	58.942	20.556	17.227	-	17.227	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

- SWCS uses full and open competition with a down select to a single contractor. The full spectrum of contracting activities are being utilized for any integration and subsystem requirements, using existing contracts where appropriate, government agencies, and new contracts as necessary. Sole source Justification and Approval (J&A) was approved and awarded to deliver final production articles to meet Full Operational Capability (FOC).
- SDV MK 11 uses full and open competition to award to a single contractor. The full spectrum of contracting activities are being employed for subsystem and integration requirements, using existing contracts where appropriate, government agencies, and new contracts as necessary. Sole source Justification and Approval (J&A) was approved and awarded to deliver final production Articles to meet FOC.
- DCS Block I uses full and open competition, resulting in the selection of a single prime contractor and award of a Fixed Price Incentive Firm Target contract for three vessels. DCS Next continues market research in FY21.
- The DDS is currently in sustainment through a maintenance and service contract which was competitively sourced, and awarded for a five-year period. The modernization and engineering/change efforts for the six DDS in inventory are executed utilizing the existing services contract.
- SOF Combat Diving is designated an MTA program which supports rapid prototyping and is executed using existing contracts, government agencies, and new contracts competitively selected as appropriate.
- UCME will use streamlined Federal Acquisition Regulation (FAR) contracting with existing or planned Indefinite Delivery, Indefinite Quantity, Blanket Order Agreement, University Affiliated Research Center, and Federally Funded Research and Development Center contracts and use Non-FAR Acquisition Authorities and Other Transaction Authority agreements, where appropriate.
- UUV Program will augment a Navy service common man-portable UUV with purpose built, modular, plug-and-play sensors and payloads to meet SOF requirements.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / <i>Maritime Systems</i>	<b>Project (Number/Name)</b> S0417 / <i>Underwater Systems</i>
<ul style="list-style-type: none"><li>• CCL engineering and manufacturing development was sole source. Program Management Office is evaluating limited competition for follow-on production contract contingent on cost tradeoffs and completeness of technical data.</li></ul>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>				Project (Number/Name) S0417 / <i>Underwater Systems</i>					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Shallow Water Combat Submersible (SWCS) Engineering Changes	C/Various	Various : Various	1.197	0.589	Jan 2020	1.203	Jan 2021	-		-		-	Continuing	Continuing	-
SEAL Delivery Vehicle (SDV)	C/Various	Various : Various	-	-		-		4.348	Jan 2022	-		4.348	Continuing	Continuing	-
Dry Combat Submersible (DCS) Next Engineering and Manufacturing Development (EMD)	C/Various	Various : Various	-	1.912	Feb 2020	5.500	Feb 2021	6.000	Jan 2022	-		6.000	Continuing	Continuing	-
DCS Enhancements / Pre-Planned Product Improvement (P3I) Changes	C/Various	Various : Various	11.416	4.241	Nov 2019	7.242	Nov 2020	3.404	Nov 2021	-		3.404	Continuing	Continuing	-
Dry Deck Shelter (DDS) Modernization	C/CPFF	Oceaneering International Inc. Marine Services Division : Chesapeake, VA	34.898	8.696	Jan 2020	-		-		-		-	0.000	43.594	-
DDS Field Changes	C/Various	Oceaneering International Inc. Marine Services Division : Chesapeake, VA	-	-		0.872	Jan 2021	0.991	Jan 2022	-		0.991	Continuing	Continuing	-
Special Operation Forces (SOF) Combat Diving-Unique Diving Technologies	Various	Various : Various	6.244	1.881	Nov 2019	1.458	Feb 2021	1.876	Nov 2021	-		1.876	Continuing	Continuing	-
SOF Combat Diving (Congressional Add)	C/Various	Various : Various	-	3.000	Nov 2019	8.700	Mar 2021	-		-		-	0.000	11.700	-
Undersea Craft Mission Equipment (UCME) Survivability, Navigation, C5ISR/SA, Power & Energy enhancements and other assured access technologies	C/Various	Various : Various	-	15.965	Feb 2020	19.101	Dec 2020	17.948	Nov 2021	-		17.948	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>				Project (Number/Name) S0417 / <i>Underwater Systems</i>					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MK18 Mod 1 Unmanned Underwater Vehicle (UUV)	C/Various	Various : Various	-	-		1.000	Aug 2021	0.968	Mar 2022	-		0.968	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	314.717	-		-		-		-		-	0.000	314.717	-
Prior Year Funding (Congressional add)	C/Various	Various : Various	14.100	-		-		-		-		-	0.000	14.100	-
Subtotal			382.572	36.284		45.076		35.535		-		35.535	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Funding	Various	Various : Various	9.094	-		-		-		-		-	0.000	9.094	-
Subtotal			9.094	-		-		-		-		-	0.000	9.094	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SWCS	Various	PSU ARL / JHU-APL : Laurel, MD / State College, PA	3.392	0.554	Nov 2019	0.208	Nov 2020	-		-		-	Continuing	Continuing	-
DCS	C/Various	Various : Various	19.600	7.519	Nov 2019	4.000	Oct 2020	2.000	Oct 2021	-		2.000	Continuing	Continuing	-
SOF Combat Diving	Various	Various : Various	1.621	0.530	Oct 2019	0.520	Oct 2020	1.119	Oct 2021	-		1.119	Continuing	Continuing	-
CCL	C/Various	Various : Various	-	-		0.348	Dec 2020	-		-		-	0.000	0.348	-
Prior Year Funding	Various	Various : Various	9.320	-		-		-		-		-	0.000	9.320	-
Subtotal			33.933	8.603		5.076		3.119		-		3.119	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems				Project (Number/Name) S0417 / Underwater Systems					
Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DCS	Various	Apogee : Tampa, FL	19.419	1.934	Apr 2020	0.550	Feb 2021	1.639	Aug 2021	-		1.639	Continuing	Continuing	-
DDS	Various	NAVSEA : Washington, DC	2.001	0.471	Jan 2020	0.334	Jan 2021	0.066	Jan 2022	-		0.066	Continuing	Continuing	-
UCME	C/Various	Various : Various	-	0.515	Dec 2019	0.591	Dec 2020	0.577	Dec 2021	-		0.577	Continuing	Continuing	-
SOF Combat Diving	C/Various	Apogee : Tampa, FL	0.361	0.169	Dec 2019	0.183	Dec 2020	0.188	Dec 2021	-		0.188	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	9.331	-		-		-		-		-	0.000	9.331	-
Subtotal			31.112	3.089		1.658		2.470		-		2.470	Continuing	Continuing	N/A
			Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			456.711	47.976		51.810		41.124		-		41.124	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

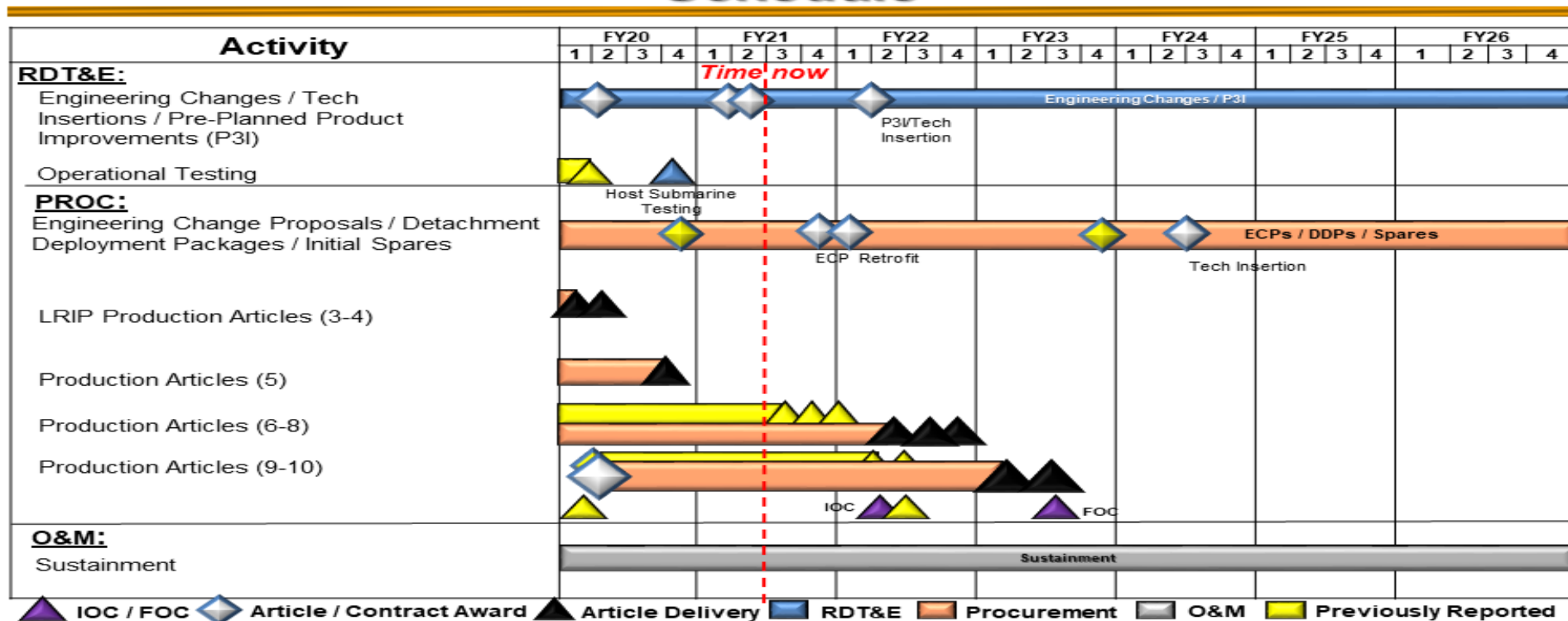
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S0417 / Underwater Systems

## SEAL Delivery Vehicle MK 11 Shallow Water Combat Submersible Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

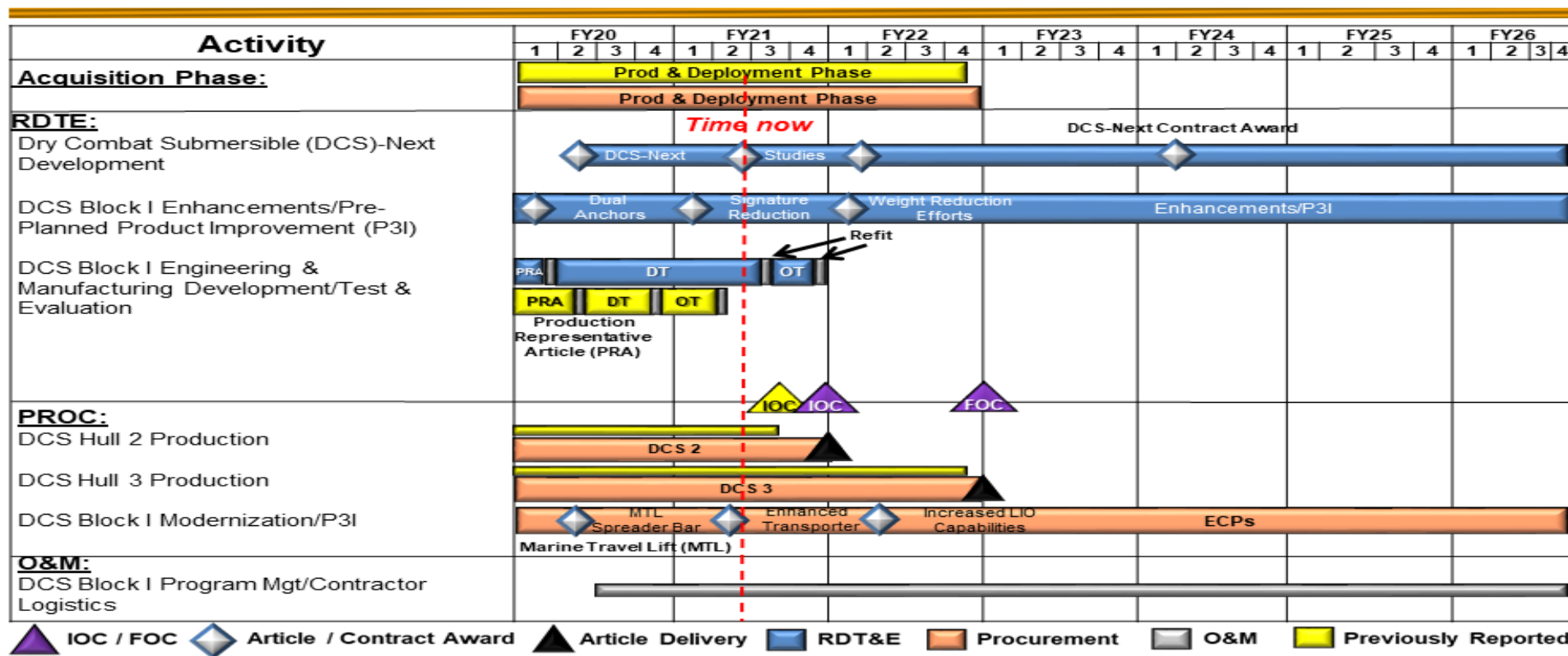
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S0417 / Underwater Systems

## Dry Combat Submersible Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

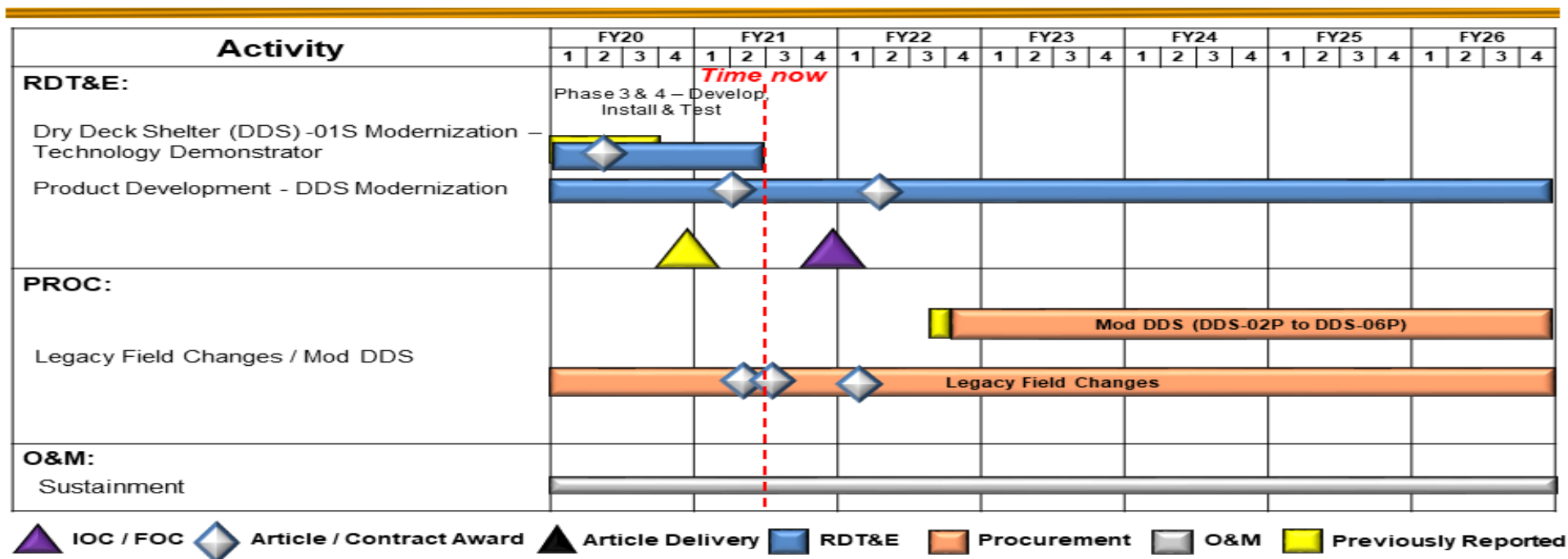
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S0417 / Underwater Systems

## Dry Deck Shelter Schedule





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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

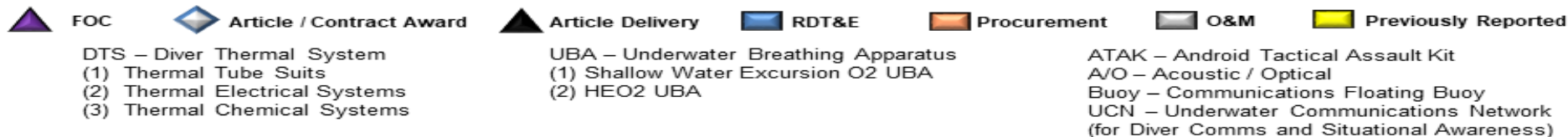
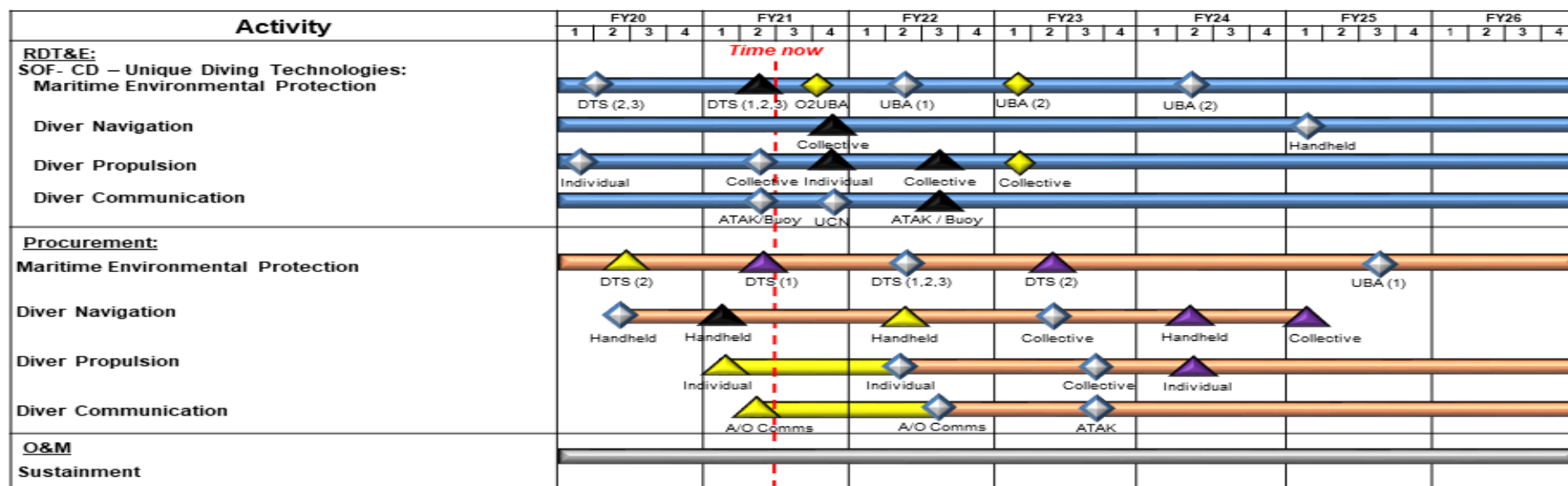
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S0417 / Underwater Systems

## Special Operations Forces (SOF) Combat Diving (CD) Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

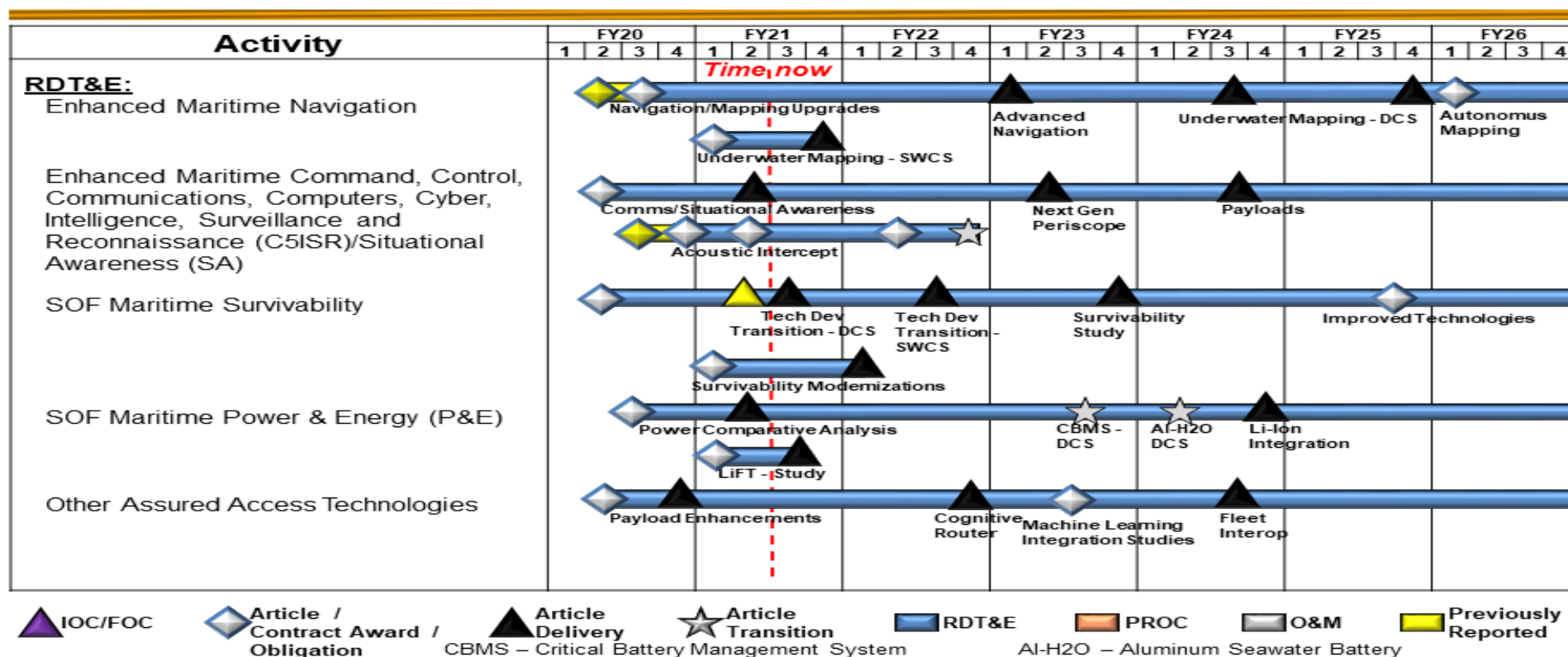
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S0417 / Underwater Systems

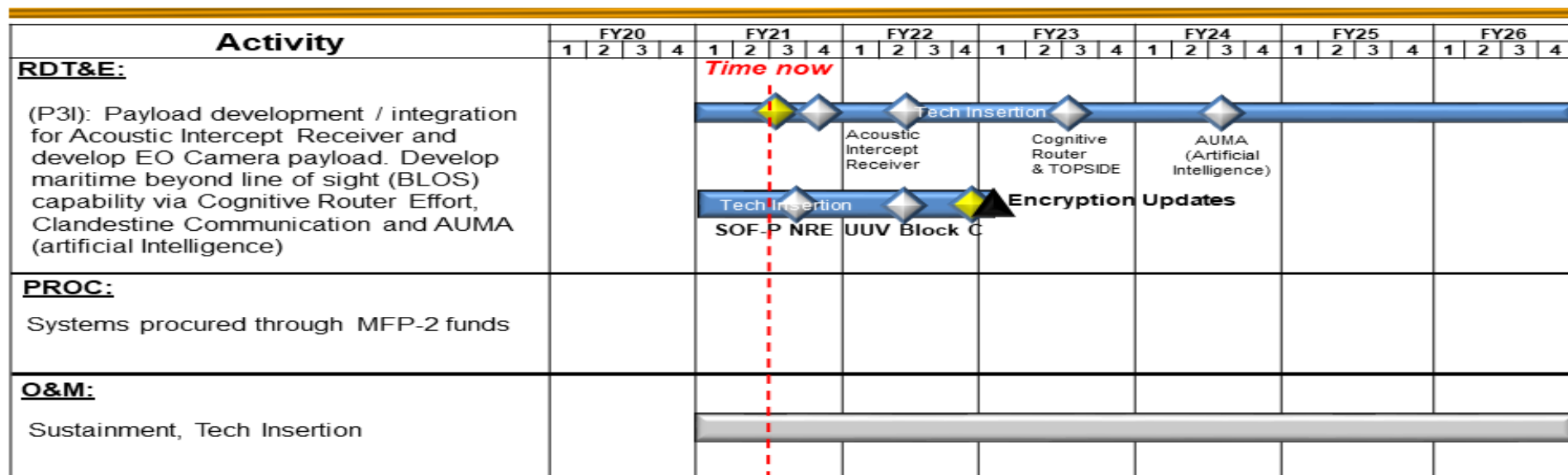
## Undersea Craft Mission Equipment Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems	Project (Number/Name) S0417 / Underwater Systems	

## MK 18 Mod 1 Unmanned Underwater Vehicle Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

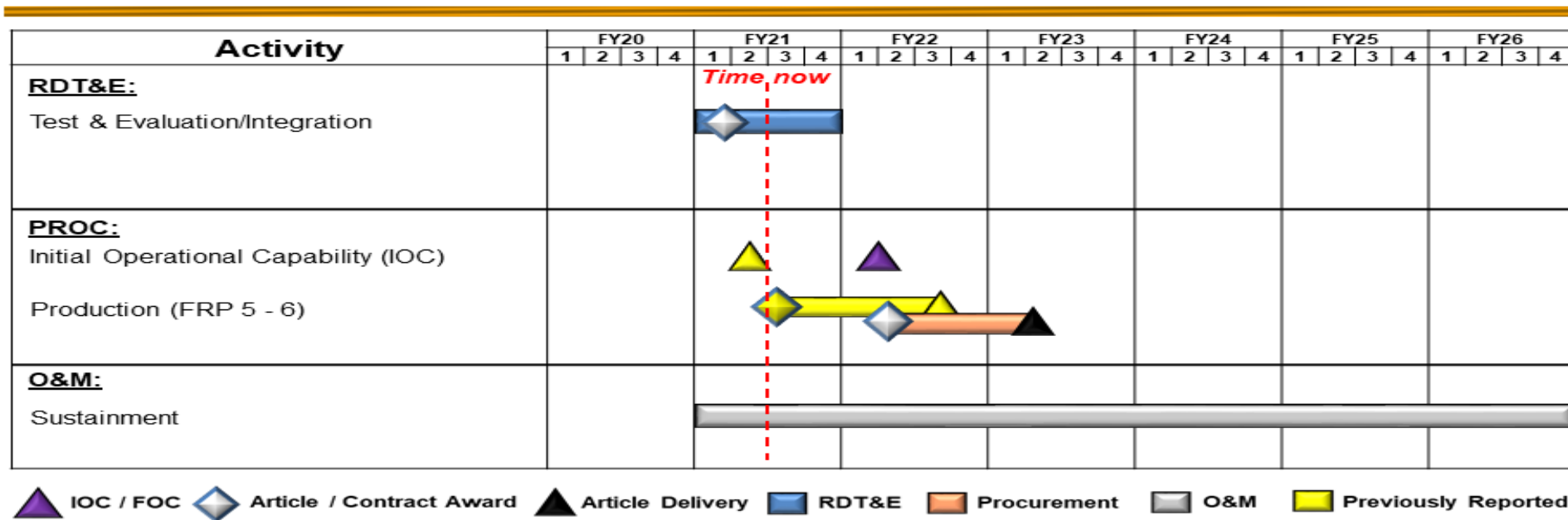
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S0417 / Underwater Systems

## Combatant Craft Light Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / <i>Maritime Systems</i>	<b>Project (Number/Name)</b> S0417 / <i>Underwater Systems</i>	

**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Shallow Water Combat Submersible (SWCS)</i></b>				
Enhancements/Pre-planned Product Improvements (P3I)	1	2020	4	2021
Operational Testing	3	2020	4	2020
<b><i>SEAL Delivery Vehicle (SDV)</i></b>				
Enhancements/P3I	1	2022	4	2026
<b><i>Dry Combat Submersibles (DCS)</i></b>				
DCS Next	2	2020	4	2026
Enhancements/P3I	1	2020	4	2026
Production Representative Article (Engineering and Manufacturing Development)	1	2020	1	2020
Developmental Test and Evaluation	2	2020	2	2021
Operational Test and Evaluation	3	2021	4	2021
<b><i>Dry Deck Shelter Modernization (DDS)</i></b>				
Phase 3 & 4 Development	1	2020	2	2021
Product Development DDS Modernization	1	2020	4	2026
<b><i>Special Operation Forces (SOF) Combat Diving</i></b>				
Maritime Environmental Protection Rapid Prototyping, Test, and Integration	1	2020	4	2026
Diver Navigation Rapid Prototyping, Test, and Integration	1	2020	4	2026
Diver Propulsion Rapid Prototyping, Test, and Integration	1	2020	4	2026
Diver Communication Rapid Prototyping, Test, and Integration	1	2020	4	2026
<b><i>Undersea Craft Mission Equipment (UCME)</i></b>				
Enhanced Maritime Navigation	3	2020	4	2026
Enhanced Maritime Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR)/Situational Awareness (SA)	2	2020	4	2026

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2022 United States Special Operations Command **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / <i>Maritime Systems</i>	<b>Project (Number/Name)</b> S0417 / <i>Underwater Systems</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SOF Maritime Survivability	2	2020	4	2026
SOF Maritime Power & Energy (P&E)	3	2020	4	2026
Other Assured Access Technologies	2	2020	4	2026
<b><i>MK18 Mods 1 Unmanned Underwater Vehicle (UUV)</i></b>				
MK18 Mods 1 UUV P3I	1	2021	4	2026
Tech Insertion	1	2021	1	2023
<b><i>Combatant Craft Light (CCL)</i></b>				
Test and Evaluation/Integration	1	2021	4	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems				Project (Number/Name) S1684 / Surface Craft			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S1684: Surface Craft	51.208	22.762	16.728	17.306	-	17.306	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides for engineering and manufacturing development of small, medium, heavy and assault surface combatant craft, combatant craft mission equipment, and Pre-Planned Product Improvement (P3I) and technology insertion engineering changes to meet the unique requirements of Special Operations Forces (SOF). This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to quickly respond to new requirements for maritime craft and subsystems. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully conduct operations associated with SOF maritime missions.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Combatant Craft Medium (CCM)  <b>Description:</b> CCM is a semi-enclosed multi-mission combatant craft for platoon-size maritime mobility in maritime contested environments. It is multi-mission capable, including Maritime Interdiction, Insert/Extract, and Visit, Board, Search, and Seizure (VBSS) Operations. CCM is Naval Special Warfare's (NSW) craft-of-choice for long-range, high-payload SOF mobility operations in contested environments. CCM has NSW's best Iron Triangle: 40 knot (kt) speed; 4 crew + 19 passengers (pax)/10,000 pound (lb) payload; and 600 nautical miles (nm) range. CCM payload capacity enables inclusion of shock mitigating seats, which is critical for ride quality, operator tactical readiness, and operator health. At 60 feet long, CCM is C-17/C-5 transportable and can launch/recover by well deck or shore based trailer.  <b>FY 2021 Plans:</b> Continue survivability enhancements, and Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) upgrades. Continue aft enclosure development and testing.  <b>FY 2022 Plans:</b> Begins aft enclosure craft integration and testing. Continues survivability enhancements, and C5ISR upgrades. Completes JTWS integration.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$1.254 million reflects completion of Combatant Craft Forward Looking Infrared Radar (CCFLIR) integration effort and delay of craft-specific Maritime Precision Engagement (MPE) efforts.	2.809	2.243	0.989
<b>Title:</b> Combatant Craft Heavy (CCH)  <b>Description:</b> CCH provides platoon-size maritime surface mobility. The current CCH is the Sea, Air, Land Insertion, Observation and Neutralization (SEALION) craft. SEALION is a fully-enclosed, climate-controlled, semi-submersible craft that operates in	3.788	0.925	0.933

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Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems	Project (Number/Name) S1684 / Surface Craft		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2020	FY 2021	FY 2022
contested environments. SEALION is NSW’s most versatile and survivable combatant craft and the craft-of-choice for sensitive maritime intelligence, surveillance, and reconnaissance missions. Iron Triangle: 40 kt speed; 7 crew + 12 pax / 3,300 lb payload; and 400 nm range. SEALION payload capacity enables inclusion of shock mitigating seats, which is critical for ride quality, operator tactical readiness, and operator health. At 77+ feet long, SEALION is C-17/C-5 transportable and can launch/recover by well deck, shore based mobile travel lift, or crane.  <b>FY 2021 Plans:</b> Continue development and integration of upgraded situational awareness enhancement and completes integration of Joint Threat Warning System (JTWS). Completes development of tech data package for CCH Capital Equipment Replacement Program (CERP) (replacement of CCH-1).  <b>FY 2022 Plans:</b> Continues development and integration of upgraded situational awareness enhancement.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.008 million is due to capability maturity and technology integration planning for CCH replacement scheduled for FY23.					
<b>Title:</b> Combatant Craft Mission Equipment (CCME)  <b>Description:</b> CCME provides a rapid response capability to support SOF combatant craft systems, subsystems, and their emerging requirements. CCME provides technology refresh efforts to correct system deficiencies, improve asset life, and enhance mission capability to leverage and exploit emerging technologies within the maritime SOF surface capability portfolio. CCME focuses on spearheading specific Technology Readiness Level (TRL) 6 technology for compatibility, maturity, design for the marine environment, and successful transition to SOF combatant craft programs.  <b>FY 2021 Plans:</b> Continue evaluation of candidate solutions for technology development including shock mitigation, family of antennas, situational awareness, Maritime Tactical Mission Network (MTMN) and enhanced Global Positioning System (GPS). Continue development, to include test and evaluation of solution for Digital Radar. Expand investment in enhanced survivability, navigation, C5ISR and Situational Awareness (SA), power & energy, and other assured access technologies. Continue Link 16 integration.  <b>FY 2022 Plans:</b> Continues evaluation and development of surface survivability enhancements; enhanced C5ISR/SA capabilities; unique power and energy capabilities such as hybrid electric propulsion; Assured Position, Navigation, and Timing (PNT); and enabling			6.249	7.381	7.788



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021	
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / <i>Maritime Systems</i>	<b>Project (Number/Name)</b> S1684 / <i>Surface Craft</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>
technologies for assured access and against near peer threats, which supports the Interim National Security Strategic Guidance (INSSG).			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.407 million is due to increased investment in enhanced survivability, C5ISR/SA, and other assured access technologies.			
<b>Title:</b> Combatant Craft Assault (CCA)		1.273	0.532
<b>Description:</b> CCA is a combatant craft for squad-size maritime mobility operations in contested environments. CCA is NSW's best craft for Visit, Board, Search, Seizure operations. It is the craft-of-choice for maritime interdiction and boarding operations because of the open deck space, maneuverability, and interoperability with an Afloat Forward Staging Base. Iron Triangle: 40 kt speed; 5 crew + 10 pax/5,000 lb payload; and 300 nm range. At 41 feet long, CCA is air transportable by C-130/C-17/C-5 and can launch/recover by crane, davit, well deck, or shore based trailer.			1.049
<b>FY 2021 Plans:</b> Continue integration and testing of CCFLIR2 mast design and Communications box/Tactical Operations Center Network (TOCNET).			
<b>FY 2022 Plans:</b> Continues integration and testing of CCFLIR2 mast design and Communications box/TOCNET. Begins and completes JTWS integration.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Increase of \$0.517 million is due to the JTWS emerging capability.			
<b>Title:</b> Maritime Precision Engagement (MPE)		8.643	5.647
<b>Description:</b> MPE is a family of standoff, loitering, man-in-the-loop weapons systems deployed on combatant craft and capable of targeting individuals, groups, vehicles, high value targets, and small oceangoing craft with low collateral damage. MPE consists of combatant craft alterations, integration of the MK 50 Remote Weapon System (RWS), and munition launcher systems. Munitions for this effort are funded through PEO SOF Warrior.			6.547
<b>FY 2021 Plans:</b> Continue detailed design and development of craft modifications, a MK 50 RWS B-Kit production representative article, and operator control station to develop a fully integrated operational capability. Continue prototype development and initial testing of the munition launcher B-Kit to produce an MPE launcher Engineering Development Model (EDM) for installation on the CCM test			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command			<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / <i>Maritime Systems</i>	<b>Project (Number/Name)</b> S1684 / <i>Surface Craft</i>	

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<p>article. Additional work will be performed in the design and subsequent integration of similar MPE launcher capabilities into the CCH platform.</p> <p><b><i>FY 2022 Plans:</i></b> Continues development of craft modifications and operator control station to refine a fully integrated operational capability. Continues development and testing of the munition launcher B-kit to refine the EDM-2 MPE launcher and EDM-2 MK 50 RWS B-Kit. Continues development of CCM A-kit modifications and testing in preparation for transition to production. Begins planned product improvements.</p> <p><b><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i></b> Increase of \$0.900 million is due to comprehensive integration and testing requirements.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	22.762	16.728	17.306

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0204SCCS: <i>Combatant Craft Systems</i>	48.462	33.278	17.080	-	17.080	-	-	-	-	-	-

**Remarks**

N/A

**D. Acquisition Strategy**

- CCM was a two-phase source selection process. Phase I involved a Small Business Set-Aside competition for two vendors to design, build and deliver test articles. Phase II selected a single vendor to provide a fully integrated baseline craft system for test and evaluation with options for production, engineering support, and contractor logistics support.
- CCH SEALION I & II were transitioned from United States Navy advanced technology demonstrator craft to USSOCOM. Sustainment for SEALION I & II is conducted via Special Operations Forces Support Activity (SOFSA). SEALION III is Sole Source to the Original Equipment Manufacturer (OEM) in order to take advantage of previous Government investments in manufacturing infrastructure for SEALION I & II.
- CCME will use streamlined Federal Acquisition Regulation (FAR) contracting with existing or planned Indefinite Delivery, Indefinite Quantity (IDIQ), Blanket Order Agreement (BOA), University Affiliated Research Center (UARC), and Federally Funded Research and Development Center (FFRDC) contracts and use Non-FAR Acquisition Authorities and Other Transaction Authority (OTA) agreements and MIPRs, where appropriate.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 United States Special Operations Command		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 1160483BB / <i>Maritime Systems</i>	<b>Project (Number/Name)</b> S1684 / <i>Surface Craft</i>
<ul style="list-style-type: none"> <li>• CCA will continue to develop, test, and integrate C5ISR capability enhancements required to increase the crafts performance characteristics, reliability, and survivability. Recently awarded five-year indefinite delivery - IDIQ contract supporting Capital Equipment Replacement Program.</li> <li>• MPE will employ Government engineering expertise and lessons learned to develop a common launch system for NSW combatant craft. Low inventory of production units will be procured through Naval Surface Warfare Center (DAHLGREN).</li> </ul>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>				Project (Number/Name) S1684 / <i>Surface Craft</i>					
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Combatant Craft Medium (CCM)	C/Various	Various : Various	16.669	2.809	Nov 2019	2.243	Nov 2020	0.989	Nov 2021	-		0.989	Continuing	Continuing	-
Combatant Craft Heavy (CCH)	C/Various	Various : Various	6.780	3.788	Jan 2020	0.925	Jan 2021	0.933	Jan 2022	-		0.933	Continuing	Continuing	-
Combatant Craft Mission Equipment (CCME)	C/Various	Various : Various	8.459	5.489	Nov 2019	7.381	Nov 2020	7.788	Nov 2021	-		7.788	Continuing	Continuing	-
Combatant Craft Assault (CCA)	C/Various	NSWC-Carderock : Norfolk, VA	2.122	1.273	Nov 2019	0.532	Nov 2020	1.049	Nov 2021	-		1.049	Continuing	Continuing	-
Maritime Precision Engagement (MPE)	C/Various	NSWC : Dahlgren, VA	6.743	8.482	Dec 2019	5.437	Dec 2020	6.301	Dec 2021	-		6.301	Continuing	Continuing	-
Prior Year Costs	C/Various	Various : Various	4.215	-		-		-		-		-	0.000	4.215	-
Subtotal			44.988	21.841		16.518		17.060		-		17.060	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CCME	C/Various	Various : Various	1.735	0.239	Nov 2019	-		-		-		-	0.000	1.974	-
Prior Year Costs	C/Various	Various : Various	1.672	-		-		-		-		-	0.000	1.672	-
Subtotal			3.407	0.239		-		-		-		-	0.000	3.646	N/A
Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CCME	C/Various	Various : Various	-	0.521	Nov 2019	-		-		-		-	0.000	0.521	-
MPE	C/Various	Various : Various	-	0.161	Dec 2019	0.210	Dec 2020	0.246	Dec 2021	-		0.246	Continuing	Continuing	-
Prior Year Costs	C/Various	Various : Various	2.813	-		-		-		-		-	0.000	2.813	-
Subtotal			2.813	0.682		0.210		0.246		-		0.246	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 United States Special Operations Command												Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems					Project (Number/Name) S1684 / Surface Craft				
		Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		51.208	22.762		16.728		17.306		-		17.306	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

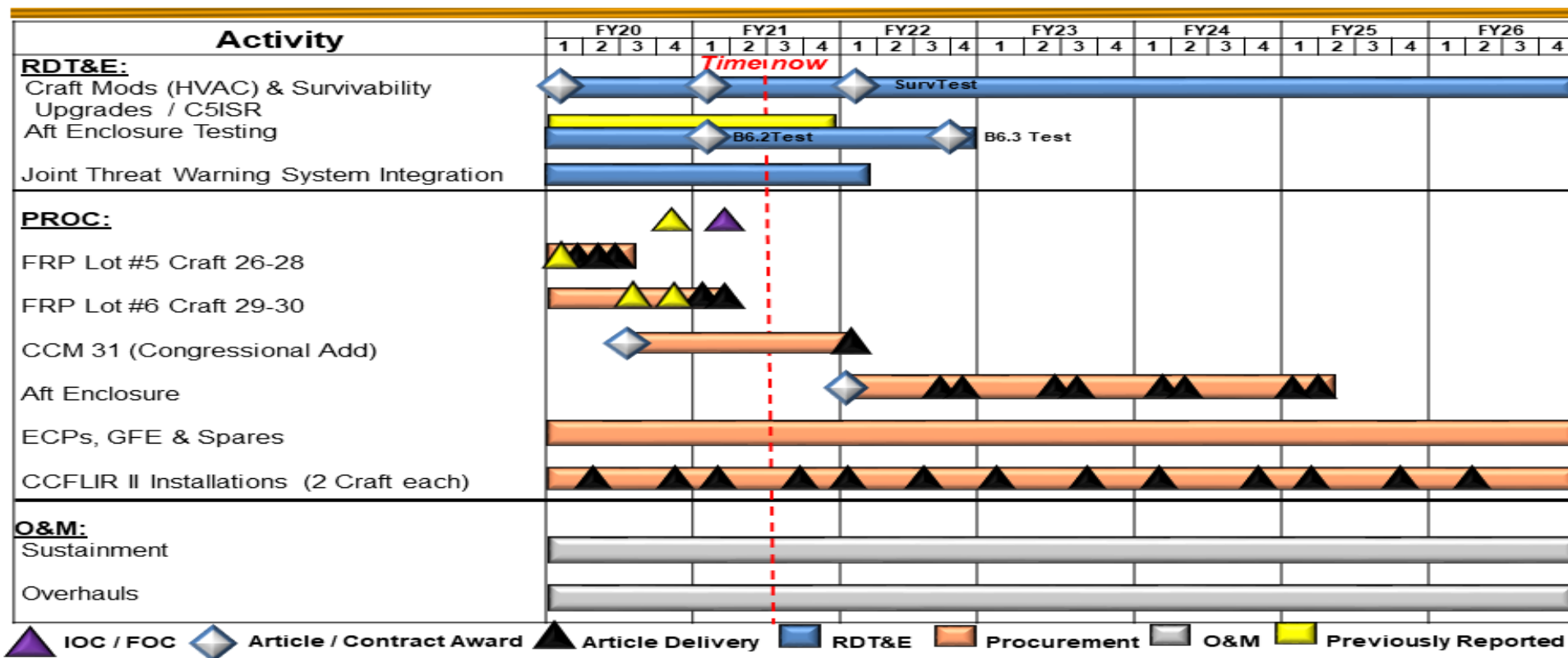
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S1684 / Surface Craft

# Combatant Craft Medium MK 1 Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

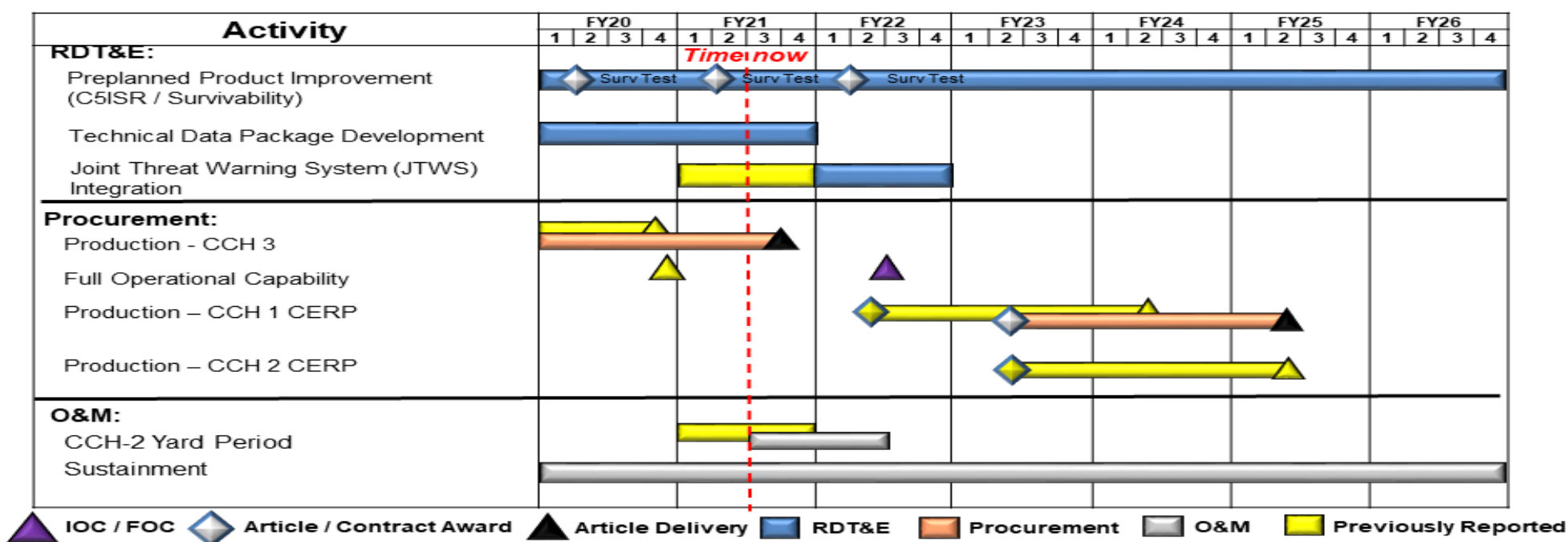
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S1684 / Surface Craft

## Combatant Craft Heavy PEO-Managed Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

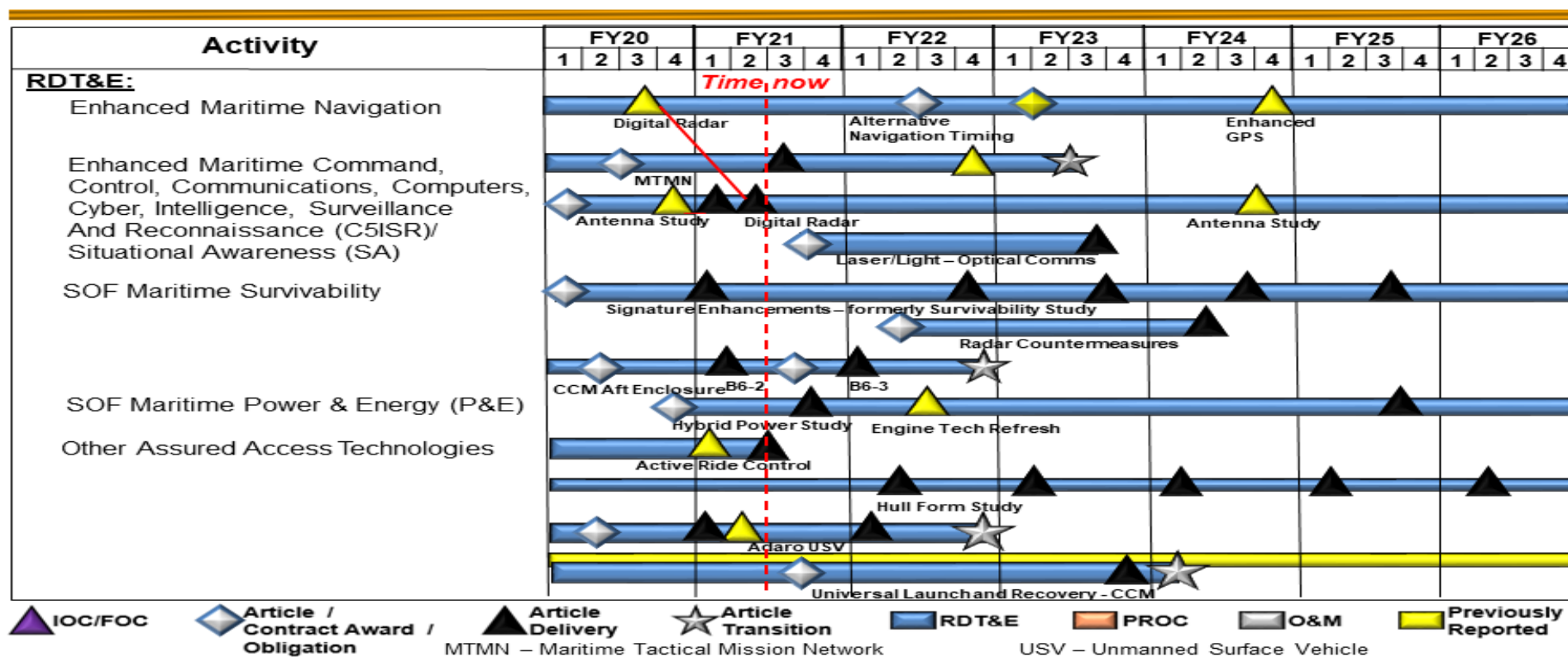
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S1684 / Surface Craft

## Combatant Craft Mission Equipment Schedule





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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

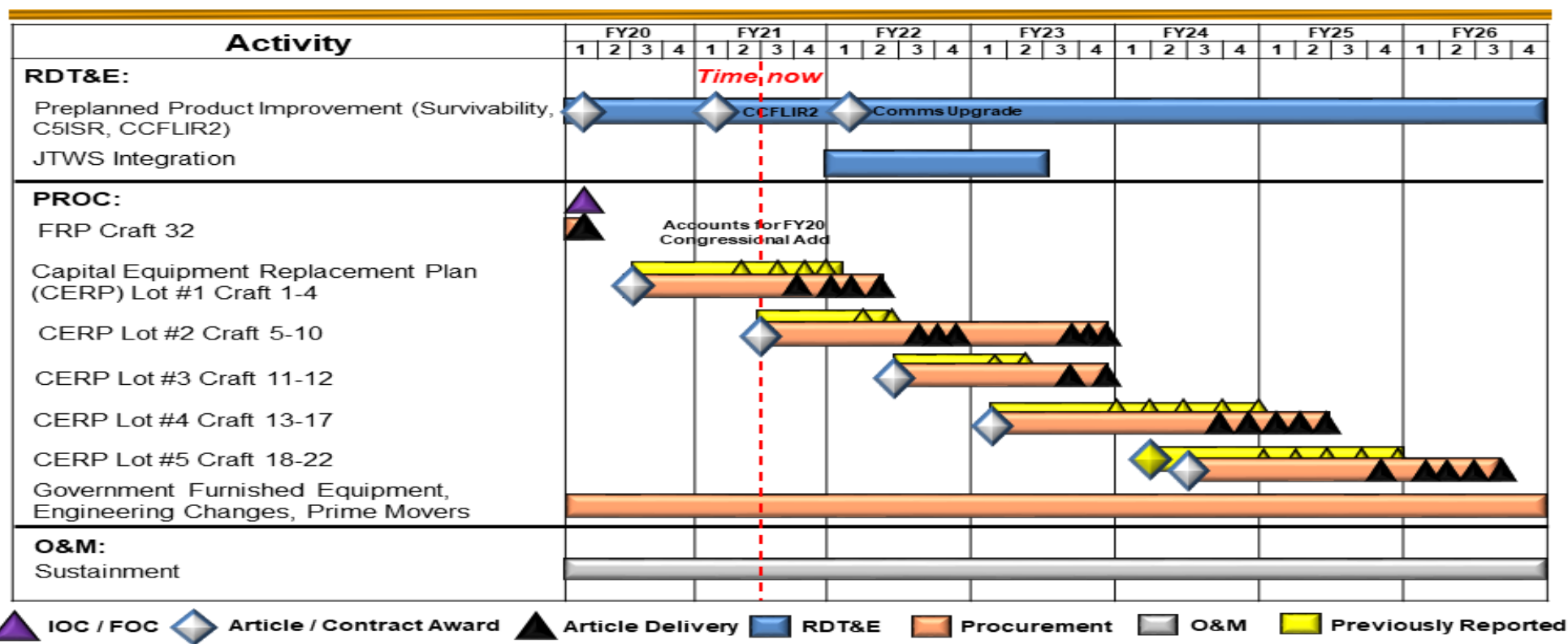
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S1684 / Surface Craft

## Combatant Craft Assault Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2022 United States Special Operations Command

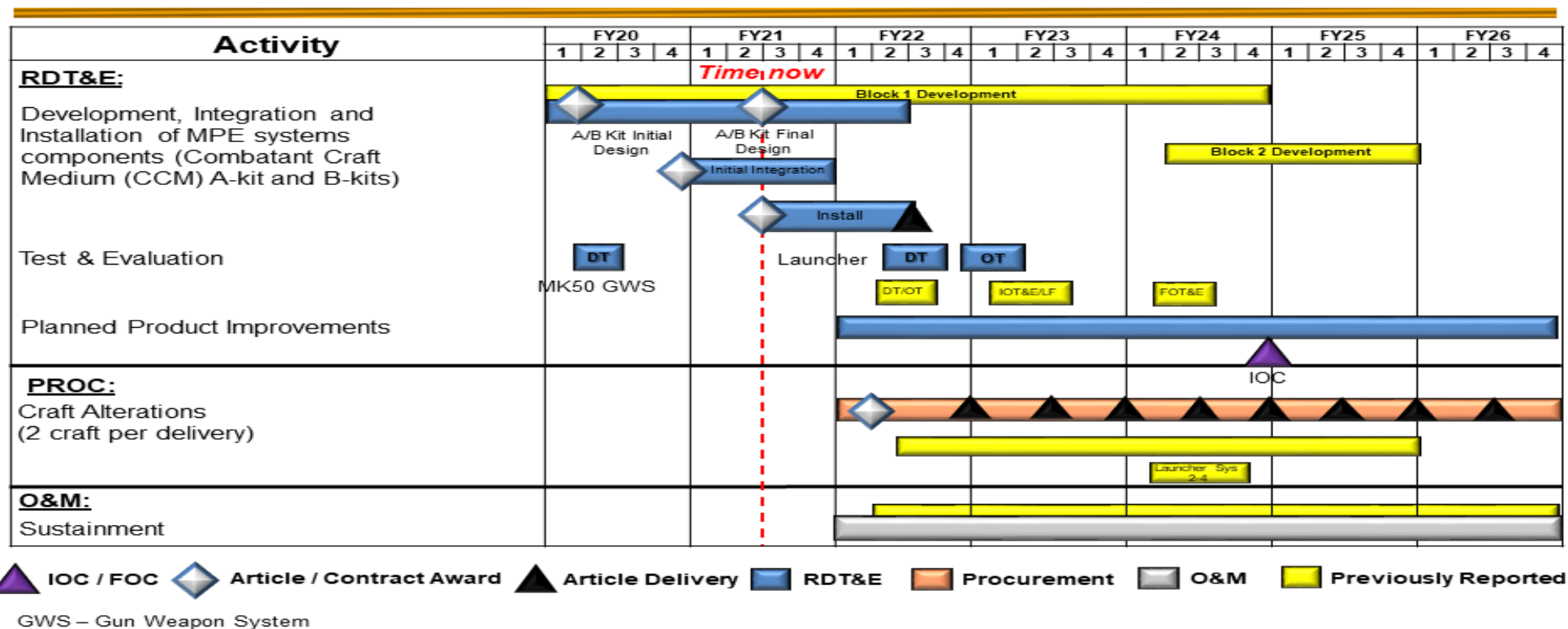
Date: May 2021

Appropriation/Budget Activity  
0400 / 7

R-1 Program Element (Number/Name)  
PE 1160483BB / Maritime Systems

Project (Number/Name)  
S1684 / Surface Craft

## Maritime Precision Engagement Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems	Project (Number/Name) S1684 / Surface Craft	

## Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Combatant Craft Medium (CCM)</b>				
Weapons, Survivability, Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) and Combatant Craft Forward Looking Infrared (CCFLIR2)	1	2020	4	2026
Aft Enclosure Development	1	2020	4	2022
Joint Threat Warning System (JTWS) integration	1	2020	1	2022
<b>Combatant Craft Heavy (CCH)</b>				
Preplanned Product Improvement (Weapons / C5ISR / Survivability)	1	2020	4	2026
Technical Data Package Development	1	2020	4	2021
Joint Threat Warning System (JTWS) integration	1	2022	4	2022
<b>Combatant Craft Mission Equipment (CCME)</b>				
Enhanced Maritime Navigation	1	2020	4	2026
Enhanced Maritime C5ISR/SA	1	2020	4	2026
SOF Maritime Survivability	1	2020	4	2026
SOF Maritime Power & Energy (P&E)	3	2020	4	2026
Other Assured Access Technologies	1	2020	4	2026
<b>Combatant Craft Assault (CCA)</b>				
Preplanned Product Improvement (Survivability, Weapons, C5ISR, CCFLIR2)	1	2020	4	2026
Joint Threat Warning System (JTWS) Integration	1	2022	3	2023
<b>Maritime Precision Engagement (MPE)</b>				
Development, Integration and Installation of MPE systems components	1	2020	2	2022
Developmental Test/Operational Test	4	2020	2	2023
Pre-Planned Product Improvements (P3I)	1	2022	4	2026

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 1160489BB / Global Video Surveillance Activities											
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	63.257	5.363	4.602	0.000	-	0.000	-	-	-	-	-	-
S500C: Global Video Surveillance Activities	63.257	5.363	4.602	0.000	-	0.000	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This program element is part of the Military Intelligence Program. Details are provided under separate cover.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	5.363	4.606	5.024	-	5.024
Current President's Budget	5.363	4.602	0.000	-	0.000
Total Adjustments	0.000	-0.004	-5.024	-	-5.024
• Congressional General Reductions	-	-0.004			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other	-	-	-5.024	-	-5.024

**Change Summary Explanation**

Funding:

FY2020: None.

FY2021: Decrease of \$0.004 million details are provided under separate cover.

FY2022: Decrease of \$5.024 million details are provided under separate cover.

Schedule: None.

Technical: None.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 United States Special Operations Command	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>											
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 1160490BB / <i>Operational Enhancements Intelligence</i>											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	121.836	9.962	11.603	10.990	-	10.990	-	-	-	-	-	-
S500D: <i>Operational Enhancements Intelligence</i>	121.836	9.962	11.603	10.990	-	10.990	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This project is part of the Military Intelligence Program. This project is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	9.962	11.612	11.031	-	11.031
Current President's Budget	9.962	11.603	10.990	-	10.990
Total Adjustments	0.000	-0.009	-0.041	-	-0.041
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-0.009			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other	-	-	-0.041	-	-0.041

**Change Summary Explanation**

Funding:

FY2020: None.

FY2021: Decrease of \$0.009 million details are provided under separate cover.

FY2022: Decrease of \$0.041 million details are provided under separate cover.

Schedule: None.

Technical: None.

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